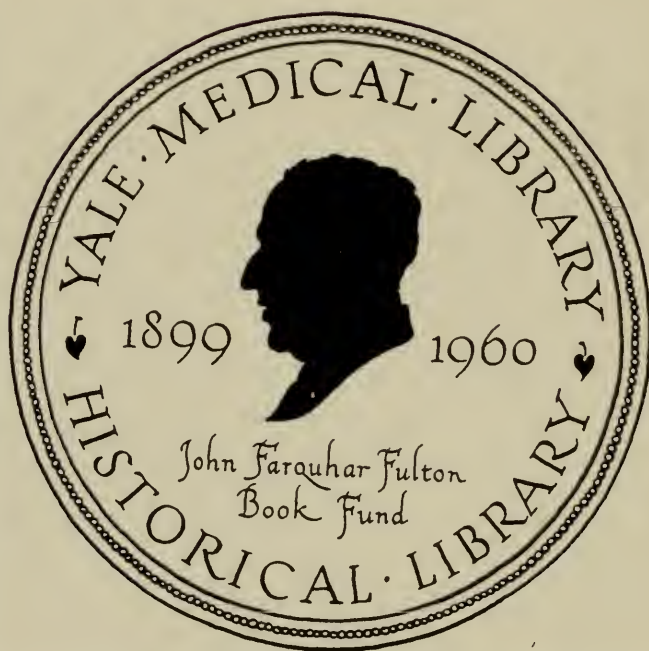




1145-04-01
\$650.00

Collingwood Lapham's
Book.
1881.

J. C.

THE
PRACTICE OF MEDICINE,
ACCORDING TO
THE PLAN MOST APPROVED
BY THE
REFORMED OR BOTANIC COLLEGES OF THE U. S.
EMBRACING
A TREATISE ON MATERIA MEDICA
AND
PHARMACY;
ILLUSTRATED
WITH NUMEROUS ENGRAVINGS.

DESIGNED PRINCIPALLY FOR FAMILIES.

BY J. KOST, M. D.

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COMPLETE IN ONE VOLUME.

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MT. VERNON:
PUBLISHED BY THE AUTHOR.

PRINTED BY E. J. ELLIS.
1847.

Entered according to the act of Congress in the year 1847,
BY JOHN KOST,
In the Clerk's Office of the District Court of Ohio.

1911
CBA
A5158
K68
1847

PREFACE.

From the revival of learning until the days of Samuel Thomson, *medicine* cannot be said to have manifested the same progressive improvement that was witnessed in the other sciences; for not only did the *materia medica* embrace the most fatal poisons, but many of the prominent principles of the science, as taught, rested on hypothesis alone, and were opposed to facts, and inconsistent with reason. But a new era has dawned;—the nineteenth century has been, thus far, characterized by the rapid spread of true principles, in medicine, as well as in every other department of science.

The career of that reform in medicine begun by Dr. Thomson, has been of the most astonishing character. Although its author had not the advantages of literary or scientific training; yet the doctrines which he promulgated, have continued to flourish, and to multiply their adherents in the midst of an opposition that has no parallel in the history of science. But wherein Thomson lacked in early education, he excelled, afterwards, in that remarkable industry and perseverance that characterized his medical investigations and inquiries; and it is certain that none could have been better adapted by nature to the great work that appears to have been assigned him by a well directed providence. His career we hail as the glorious dawn of a still more brilliant day, that will, ere long, dissipate the darkness of multiplied ages, and extend through all the channels of human society the impulses of substantial hope, the blessings of health, and the advantages and liberty of true science. He removed the rubbish, excavated the soil, and laid a foundation deep on the imperishable rock of truth:—his successors must rear the superstructure,—give it the polish of science, and furnish its various apartments.

For the success of the great enterprise of reform, we are mainly dependent, under the blessing of Heaven, upon the intelligence of the people. The dominion of Allopathic principles, like all tyrannies, was based in public ignorance, and sheltered beneath its own obscurity. Botanicism, on the contrary, rests its hope of success in the intelligent confidence of enlightened reason. The day is past when either *priestcraft* or *medical superstition* may control the happiness and destinies of the people; they now think and act for themselves, at least to a very considerable extent.

To assist in extending this important knowledge to the people, and thus to enable them to remove their maladies, and to secure the blessings and comforts of health, is the grand object of the present work. It is true that since Dr. Thomson first published his *New Guide to Health*, many books have been written, and much light has been disseminated; yet the demand is far from being satisfied, the call for more light is still heard on every side.

It is not pretended that the present work embraces much that is new, and that is not contained in some other botanic-books, and that from any such considerations it merits patronage to their exclusion; yet, it is contended that in its adaptation to the purposes for which it was designed, it is not inferior to any work that has ever preceded it. What the reader is here to understand, is that the work, as already stated, is designed chiefly for families and private individuals, and that in this, such persons have facilities for forming a knowledge of the reformed or botanic principles and practice of medicine, that are not excelled by any other work yet published.

Although this work is designed chiefly for the people, yet *physicians* need not therefore reject it. Its simplicity should not depreciate it in their estimation; and, although the author hopes soon to furnish them something more scientific and worthy of their patronage, yet this work is in no way inferior to those that now *necessarily constitute their libraries*.

There is now a general disposition among the people to do more or less for themselves in the way of medication before they think it necessary to employ professional aid. A dose of *pills*,—a good *sweat*,—an *emetic*, or some other means is generally used in ordinary attacks of disease; and it is not until those means fail, that the physician is sent for. On investigation it will be found that these simple means, being used in the onset of disease, in a large majority of instances proves successful. But as all diseases that are rapidly cured are generally considered of a trivial character, the most of

these cases pass unnoticed, although many, if left without proper treatment, might have eventuated in death.

Now if so much is done by the people, without a knowledge of the principles of medical science, what an infinite benefit must result from the general distribution of proper medical books; for by these they will have their reason enlightened,—their judgment strengthened, and their experience confirmed, and they thus rendered much more competent to adopt the most proper treatment.

It is, however, not supposed that all will become physicians, nor yet that many will depend entirely on their own skill in difficult cases; but as they are most interested in their own health and welfare, and know their various *peculiarities* of constitution and feelings much better than any other person *can ever learn them*, they will be expected to embrace every opportunity to gain a knowledge of the *best means of promoting their health and happiness*.

It has been objected that persons without a knowledge of the *anatomy* and *physiology* of the human economy, have not the qualifications necessary to administer medicine to the sick: and it may be remarked that the *propriety*,—NAY THE NECESSITY, of a *most thorough knowledge not only of anatomy and physiology*, but of *Materia Medica, Therapeutics, Pathology, Surgery, Obstetrics, Medical Jurisprudence, Natural Philosophy, Chemistry, Botany, &c.*, for a practicing physician is unquestionable; yet to say that families and private individuals cannot do any thing for themselves, in removing diseases in their incipient stages, or those of a more mild character, without a thorough knowledge of these various departments of medical science, is taking for granted a matter, the falsity of which is proven by thousands of instances, almost every day, in every part of our country.

In getting up the present work, the greatest attention and care has been bestowed on it, in order to simplify and make plain every part, so that persons of ordinary capacities, and common school education, may be able fully to understand every part of it. It is true that some technical or hard terms have occurred, occasionally, in its pages, but these could not have been well avoided without a great deal of circumlocution or roundabout talk; the difficulty arising from this circumstance, however, is, in a large measure, removed by the very copious *Glossary* or dictionary in the back part of the book. There is perhaps not a single difficult term that occurs in the work that is not explained in this.

The part treating on practice is arranged in alphabetical order, as it was supposed to be more simple, and better adap-

ted to the use of private individuals, than any system of classification could possibly be. In this part, all the diseases of common occurrence in this country are embraced,—their character and symptoms fully pointed out, and the most appropriate treatment given, in a style as *brief*, and yet as *comprehensive* as possible. It is not to be expected, however, that the endlessly varying symptoms of the different forms of disease, can be so pointed out as to answer to the character of all the cases that may occur in practice; but as the judicious practitioner always treats cases according to the symptoms that occur and not according to the name by which they may be called, it is a matter of minor importance whether the diagnosis of every case is clearly made out or not.

The most common symptoms of all the examples given, are carefully pointed out, so that the practitioner, by comparing them and taking their aggregate in any case that may occur, he will generally be able to give an answer to those who are ever ready to enquire after the names of disease.

It is not expected that the practitioner will carry out the treatment, herein recommended, to the letter, in every instance; but that in cases which may seem not likely to yield to any one plan, the judicious practitioner will modify or vary the treatment, according to the particular indications of the case, being careful, however, to carry out the general principles herein laid down.

Much advantage may be gained by the young practitioner in comparing the treatment of similar cases: by these means, ideas and plans of operation will suggest themselves that might not otherwise occur to the mind.

The *materia medica* is sufficiently large to admit of a liberal selection of remedies. The advantages of this will be fully appreciated, as the same articles are not obtained with like convenience in all places, while others, perhaps equally good, may be readily procured. Furthermore, the system is very apt to become accustomed to the action of medicines, and thus to make their further continuance useless, while other articles of the same class may act as fresh agents. Finally, the various peculiarities of constitutions make a corresponding variety of the same agents necessary: thus we find that some cathartic medicines, for instance, will not operate on certain individuals, while, perhaps, on the other hand, medicines that are not generally regarded as cathartics will operate powerfully on them in this way.

In the description of plants, the botanical as well as the common names are given, in order thus to avoid mistakes in the identity of articles. Here a means that will be of not a

little service to those who are endeavoring to get a knowledge of plants may be found in the sexual system of classification. The plants therefore, have the number of the class and order to which they belong, given, which will much assist in finding them.

The articles of the *materia medica* have been classed off according to their most prominent medical properties, and the relative value of each has been pointed out by the order in which they are found in the sections. This plan will, no doubt, be generally approved, as it offers great facilities, especially to the inexperienced practitioner.

The most of the engravings will, it is presumed, meet with general satisfaction. The delineations of many were taken from nature, by an excellent artist, and the engraving of most of them was done by an experienced workman. A few of them, however, were made by another individual, and are rather poorly executed, and would not have been used had time permitted the publisher to have procured others.

With a view of making the work as useful as possible to families, a goodly number of specimen compounds are given in the part on pharmacy, and although it may frequently be necessary to change the formulas of medical compounds in given cases, yet, as a general thing, the specimens herein given will happily fulfil the indications for which they are intended. The practitioner may be assured that they have all been amply tried, and that they have usually given complete satisfaction. The recipes, of the majority of the most popular compounds used by botanical practitioners, are herein given.

In offering this work to the public, the author indulges the hope that whatever defects may come to light will be favorably considered, for, as will readily be seen, the only aim has been to get up a book of *general and practical utility*, without any particular care as to excellency of style and fineness of appearance. The only apology that is offered for what it may lack in fulfilling the specific purpose for which it is designed, is that the author, amidst other important business, extracted the most of it from a large file of his manuscripts, and prepared it for the compositor while the work passed through the press, that is, *in the space of a few months*. The articles on *fever* and *inflammation* are scattering extracts from the manuscripts of a larger work of the author, and lack much in the order of their appearance: but it is thought that what is here given is sufficiently comprehensive and definite to give the common reader a knowledge of the new theory of these *most important of all pathological phenomena*.

But after all that may be said, the public character of a work generally depends upon its true merits; a candid investigation is therefore solicited in this case, with the hope that the work may prove extensively useful, and thus fully meet the authors highest expectations.

Mt. Vernon, Ohio, March, A. D. 1847.

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PART FIRST.

PRACTICE OF MEDICINE.

APOPLEXY.

(*Apoplexia.*)

APOPLEXY is characterized by a sudden loss or suspension of voluntary motion, whilst the vital functions continue with but little or no perceptible disturbance.

The attack sometimes comes on without any symptoms indicating its approach. More usually however, there is experienced a sense of dullness, or a deep seated pain in the head, and vertigo, or dizziness; ringing in the ears; throbbing of the temporal arteries; inability to articulate distinctly; dimness of sight, and dullness of hearing. Sometimes a sensation, as from flashes of light, or sparks passing before the eyes, are experienced; drowsiness, and confusion of ideas; irregular spasmodic contractions of the muscles of the face, and in some instances, pains are experienced in the pit of the stomach, in the side, and also sometimes in the fingers. But the most common and certain signs of the approach of a fit of apoplexy, are the pain in the head, vertigo, and ringing in the ears.

The duration of these symptoms before the fit sets in, is extremely various. In some cases they do not continue more than a few hours; in others, they occur, with occasional intermissions, for many days, weeks, months, or even years. It is often the case, just before the attack commences, that the foregoing symptoms become considerably aggravated. In the most violent cases, the attack comes on with a sudden loss of sensation, and motion; the patient sinking almost instantly into a profound stupor, which often within one hour ends in

death. In less violent cases, the sufferer generally lays a number of hours in a state of deep stupor; his breathing is difficult and stertorous, and is attended with puffing and frothing at the mouth; his eyes, although, sometimes immovably fixed, often roll wildly in their sockets, and are much bloodshot; the face is generally flushed and somewhat swollen; the veins in the temples and neck are turgid. The jaws are generally spasmodically closed, and swallowing is always difficult.

Apoplexy is caused by compression of the brain, and hence may arise from congestion, or extravasation of blood, or from the pressure of serous exudations. When the disease arises from the first cause, it is called *apoplexia sanguinea*, and when, from the latter, *apoplexia serosa*. Besides these, there are other causes that occur occasionally: the disease may arise from mechanical injuries of the head; from poisons; from violent passions of the mind &c.

The disease chiefly attacks individuals of advanced age; and seeming also to prefer those of corpulent habits, and such as have a short neck and large head, and who practice intemperate, or inactive and sedentary habits.

Apoplexy is sometimes attended with palsy, or paralysis of some parts of the body, which is often difficult to cure. Instances also occur, in which the patient lays in a kind of a fit for several days, from the effects of which, he seldom entirely recovers.

Treatment.—Immediately on the attack of apoplexy, the patient should be placed in an upright position, in a cool and airy place; his clothes should be loosened, especially those about the neck.

Medicine.—The first object in the medical treatment of this disease, should be to equalize the circulation. For this purpose, the *anti-spasmodic tincture* should be used freely. It is sometimes a matter of considerable difficulty, to administer any medicine per stomach, owing to the difficulty of deglutition or swallowing. Efforts should, however, be made to get down two or three table-spoonfuls of the tincture; or if the anti-spasmodic tincture is not at hand, the tincture of lobelia may be used in its stead.

Rubefacients and friction.—The superior advantages of these means, will readily be discovered by all. The rubefacient oil, or common bathing drops, should be applied to the entire body, with considerable friction or rubbing, which should be continued until the patient recovers.

Injectiōns.—This mode of administration, is often of incalculable advantage, especially if the medicine cannot be administered in the common way. The same medicines may, in general, be administered in this way, that are used per stomach. One, two, or three table-spoonfuls of the anti-spasmodic tincture, or as much each, of the tincture of lobelia, and compound tincture of myrrh, with a pint of warm water, is a proper quantity to be administered at a time. The injections should be repeated as often as once in fifteen minutes, until relief is obtained.

Bathing.—The vapor bath, in apoplexy, will perhaps give relief quicker than any other means, but the facilities for its administration are not always at hand. To apply the vapor, the patient should be so surrounded by blankets, or quilts, so as to confine the vapor to the parts below the neck.

Emetics.—This class of remedies are indicated, when the disease arises from taking poisons, drinking spirits, or from taking large quantities of food.

It is proper here to make some remarks about the practice of bleeding, in the treatment of apoplexy. Blood-letting is the means chiefly depended on by fashionable physicians, and the people have become so much accustomed to its practice, that they consider a treatment imperfect without it. The practitioner is saluted by the cry, *Bleed him! Bleed him! Oh, why dont you bleed him;* and it is sometimes with considerable difficulty, that the mischievous, and dangerous practice is avoided, by those who are not decided in their character.

The idea generally prevails that the disease arises from a superabundance of blood, and that hence no treatment can be better than blood-letting: but this is a mistake. It is not the *quantity* of blood that does the mischief, but it is the interruption of its *free circulation*. Indeed, it is often the case, that apoplexy arises from the *loss* of blood. Professor Dunglison, remarks on this head: "Any thing that gives occasion to repletion, and on the contrary to exhaustion and debility, may occasion irregularity of action in the vessels of the brain, and, indeed, in the whole of the circulatory system, and produce hyperæmiâ [fulness,] of that viscus. The effect of extreme exhaustion in inducing this state is seen in the prostration caused by excessive uterine, hemorrhage. The patient may be pulseless, pale, and exanguious, [bloodless] and, in the course of a few hours, may labor under the most manifest symptoms of active cerebral hyperæmia." * * * * "In all sudden and

violent attacks, indeed, it [blood-letting] is often had recourse to before even the practitioner sees the patient, and frequently with unequivocally bad effects. * * * It is all important, however, to bear in mind, that the practice of drawing blood profusely, immediately on the occurrence of cerebral hemorrhage, cannot fail at times to be injurious. A shock is often given to the nervous system by the hemorrhage, resembling that which occurs in the concussion of the brain, and if blood be taken away immediately, and from both arms, as is often done, the same injurious effects may result as from the same practice in concussion. The practitioner should not be led away by the clamor of bystanders.* Dr. Eberle states:—"It is stated, and very correctly, that all the external manifestations of strong apoplexy are sometimes the immediate result of excessive hemorrhage. I have already referred to the case reported by Mr. Brown, in which entire insensibility and stertorous breathing, were the immediate consequences of excessive uterine hemorrhage, and which were removed by transfusing blood from another person into the patients veins. Dr. Denman has also related an instance of apoplectic symptoms supervening on very profuse hemorrhage, and many more cases of this kind might be collected. * * * The experiments of Kellie, on animals, show that serous effusion within the head, is a pretty constant concomitant or consequence of excessive sanguineous depletion; and the experiments of Dr. Seeds, go to establish the same fact." Thus it is evident, that the difficulty instead of arising from an *excessive quantity* of blood, is in many instances caused by the *loss of blood*, and generally by obstructions of its free circulation. In view of this fact it is plain, that in no instance, is blood-letting the better practice, but that it is always mischievous, and often fatal. It is not here argued, however, that the practice may not sometimes give relief, especially, in cases of violent cerebral congestion (*termination of blood to the brain*;) but all this may be effected just as quick, and certainly, by the proper means of equalizing the circulation, as it can possibly be done by taking away a part of the blood. Is it not as reasonable and philosophical, for the practitioner to make room in the obstructed vessels for the necessary blood, as it is to take away a part of the blood, and thus adapt its quantity to the obstructed condition of the vessels?

*Practice Vol. 2, Page 261.

ASTHMA.

(*Dyspnæa et Orthopnæa convulsiva.*)

Asthma is an affection of the breathing apparatus, characterized by great difficulty of respiration, tightness across the breast, and a pressing sense of suffocation.

The disease generally works by paroxysms, which usually come on in the night, and the patient is often compelled to leave his bed and seek the fresh air. As the paroxysm comes on, the breathing becomes difficult, laborious, and wheezing; the patient grows restless; his lungs seem to swell so as to fill his chest; the pulse is generally full, and quick; the face often bloated; and the veins of the head and neck turgid; there is often a short dry cough, which is sometimes attended with slight expectoration or raising of phlegm.

Treatment.—In the treatment of asthmatic complaints, no article has been found that will answer a better purpose than *lobelia*. This article may justly be considered a sovereign remedy, in all curable cases of this disease. The tincture should be used in frequent doses, and continued until relief be obtained. Such other convenient means, as are calculated to relax the system, and equalize the circulation, such as bathing the feet, the vapor bath, stimulating and relaxing teas, &c., may be used in connection with the *lobelia*.

Emetics.—The dose of the *lobelia*, after it has been given long enough in small portions to relax the system, should in severe cases, be increased so as to produce free emesis or vomiting; and thus the phlegm, loosened or disengaged by the expectorant properties of the *lobelia* first given, will be carried off during the process or act of vomiting.

After the paroxysm of the disease is broken up, the use of the *lobelia* should still be continued for some time, and on the recurrence of the symptoms, its use should be early resumed.

Oxymel of Lobelia.—In severe cases, in which the patient is never entirely free from symptoms of asthma, the medicine should be constantly used. For this purpose the *oxymel of lobelia* is best, as it is more pleasant to take. A small portion of the powder of skunk cabbage may be mixed with it.

Linseed tea.—An infusion, or tea made of flaxseed, previous-

ly well browned or roasted in the same way that coffee is prepared, is very good for asthma in children.

Vapor bath.—In severe paroxysms, it will be found that the vapor bath will give signal relief, and if with this, a lobelia emetic is administered, the paroxysm may be broken up at once.

Anti-spasmodic tincture.—In what is called nervous Asthma, it will be found that the anti-spasmodic tincture is an excellent remedy; the dose is half a tea-spoonful. The skunk cabbage, in those cases, is also very applicable.

Prevention.—Asthma is chiefly caused by exposure to wetness and cold, as by going with wet feet; wearing wet or damp clothes, &c. Patients suffering from this distressing complaint, should, therefore, be careful to avoid exposures in this way. By taking occasionally a dose of the tincture, or oxymel of lobelia, after exposure, the effects may be prevented, or considerably modified.

ACCIDENTAL BLEEDING.

(*Hæmorrhagia Accidentalis.*)

The treatment of accidental bleeding, properly belongs to the province of surgery. But as this work is intended chiefly for the people, who are compelled by want of information as to these matters, in many instances, to wait for the assistance of a far-fetched physician, or surgeon, while their friends or neighbors are dying for want of prompt attention, in simple cases that might be relieved by any ordinary person, possessing but a slight knowledge of medicine or surgery; it is designed here to make some remarks on the treatment of such cases.

On the occurrence of accidents or injuries, that are attended with much hemorrhage, immediate efforts should be made to arrest it. Sometimes when the artery does not lay too deep, it may be compressed with bandages, until the inflammatory action, (always necessary to the healing process,) sets in, when it will no more return.

Styptics.—If the wound be not too deep, cranesbill may be applied, in a fine powder; otherwise a very strong decoction may either be injected into the wound, or applied by means of a sponge, or rag. The common puff-ball; bloodroot; scraped horn; matico leaves; juice of green persimmons; white beth root &c., are all good articles to stop the flow of blood. If the hemorrhage cannot be stopped by either of these means here recommended, the bleeding vessel must be taken up, and secured by ligature. To do this, in the absence of proper instruments, a common sewing needle should be passed through the mouth of the vessel, and the latter thus raised, so that a silk thread may be firmly tied around it, below the needle. All this may be done with the greatest ease, by any individual of ordinary judgment.

BLEEDING FROM THE BOWELS.

(*Proctorrhagia.*)

Although hemorrhages from the bowels are of rare occurrence, excepting when they arise from hemorrhoids or piles, yet we have a number of severe cases on record, and some that terminated fatally. The blood is sometimes found to pass into the intestines without the occurrence of any lesion, or injury to the parts, in the same way that it exudes into the air passages of the lungs. Bleeding from the intestines, however, sometimes is a consequence of other diseases, such as cancer, ulcerations of the bowels, typhoid fever, dysenteries, &c., in which cases it is sometimes difficult to stop the bleeding.

Treatment.—The use of our most active vegetable astringents are indicated here; an infusion made by scalding an ounce of the powder, either of *cranesbill*, *matico*, *white beth root*, *witch hazel*, or even oak bark, in a pint of water, and used freely by injection, as well as per stomach, will in general arrest the bleeding in a short time. The astringent tonic compound, prepared as above, is a very good article, and may be used with confidence. The rubefacient solution, applied with considerable friction all over the body, will be very serviceable: or should this not be sufficient to equalize the circulation, the vapor bath should be applied as warm as it can be borne.

Bleeding from Piles.—Bleeding from hemorrhoidal tumors, is very common, and although not very dangerous, it is sometimes very troublesome.

Treatment.—The treatment here, as in other cases of bleeding, consists in the use of astringents, or styptic preparations. A strong infusion of the astringent tonic compound, or any of the simple astringent articles, applied by means of a sponge, or cloth, is correct treatment. If the bleeding parts are within the intestine, the strained infusion should be injected by means of a syringe. *Perseverance*, in the treatment, is sometimes necessary.

BLEEDING FROM THE LUNGS.

(*Hæmoptysis.*)

Bleeding from the lungs, although very alarming to some people, is not generally very dangerous; and it is seldom the case, that it arises from a rupture of the blood-vessels. From a morbidly relaxed condition of the parts, the blood in this, as in many other cases of passive hemorrhage, passes through the delicate textures, in the same manner that water is found to permeate soft leather. Hemorrhage from the lungs, varies considerably in its extent or violence.

“Active hemorrhage from the lungs is often preceded by certain premonitory symptoms; such as a feeling of heaviness and lassitude; anxiety; stricture across the breast; short cough; palpitation of the heart; deep and frequent sighing; a deep-seated, pungent or burning pain under the sternum, [breast bone,] slight and creeping chills; cold hands and feet; alternate paleness and flushing of the face; mental and corporal irritability; a quick, small, frequent and corded pulse; and often a disagreeable salty or sweetish taste in the mouth. After these symptoms have continued for a longer or shorter period; the patient usually begins to feel a sense of warmth in the breast, gradually rising up towards the larynx, attended with a saltish taste. Slight coughing now ensues, or an effort is made to hawk, and the blood makes its appearance. In many cases, however, the hemorrhage comes on suddenly, without any premonitory symptoms whatever. When this is the case, there is commonly but little blood discharged at a

time: but the hemorrhage is apt to return frequently for several weeks, and even months."

When the bleeding arises from injuries of the vessels, caused by ulcerations in the lungs, or by heavy lifting; violent exercise; blowing on wind instruments, &c., it is always somewhat more difficult to stop immediately.

Treatment.—The indications of cure in this case, are to astringe the parts by the use of styptics; to equalize the circulation; and to guard against the recurrence of the symptoms.

Large doses of equal parts of bayberry and cayenne pepper, taken once in eight to ten minutes, will generally be sufficient to arrest the hemorrhage. In the use of this medicine, we have the advantage, not only of the astringent or styptic properties of the bayberry, but the diffusive and stimulating power of the pepper is also well calculated to equalize the circulation. Thomson's *composition powders*, in large doses, will answer very well instead of the cayenne and bayberry, and is at the same time more pleasant to take. A strong infusion of cranesbill and white bethroot, in equal parts, or the astringent tonic compound, should be drank freely. Bayberry and sumac berries, steeped in boiling water, so as to form a strong tea, adding a little cayenne pepper and some sugar, will be found very good in bleeding from the lungs.

Bathing the feet in warm water, and using such other means as are calculated to promote perspiration, will be found eminently serviceable; and in difficult cases, even the vapor bath may be necessary to equalize the circulation.

Common *table salt*, taken in teaspoonful doses, dissolved in water, is a very popular remedy in bleeding from the lungs.

After the bleeding is stopped, the patient should be careful, to avoid exposures, and every other means calculated to favor a recurrence of the bleeding.

BLEEDING FROM THE NOSE.

(*Epistaxis.*)

Bleeding from the nose is not generally regarded as requiring medical attention. But in cases of protracted bleeding, or when the effection (as is sometimes the case) becomes a

confirmed habit, the health of the individual may suffer considerably from a want of proper attention.

Bleeding from the nose often attends fevers of the synochal or high grade, and this circumstance has been cited as an argument in favor of blood-letting in fevers, on the ground that it is a natural indication; but this idea is by no means sustained by philosophy. The interior of the nose is not favored with a covering, possessing a firm texture, like that of the skin; but it, on the other hand, consists of a very delicate network of vessels. It is very obvious therefore, that in all cases of high vascular action, as in fevers, and violent exercise, that these delicate parts will give way and thus the blood escape. Bleeding from the nose, cannot, therefore, be rationally considered any other than a diseased action.

Treatment.—The general treatment in this affection, should in the main, be about the same as that for bleeding at the lungs. The local treatment should consist of the application of cold water to the face and head; snuffing it up the nose, at the same time. Decoctions, or strong infusions of the best vegetable styptics, such as the *cranesbill root*, *white pond lilly root*, *matico leaves*, &c., may be taken in proper doses, and also snuffed up the nose. In the selection of these articles, those should be preferred, that are the least irritating in their effects. The powder of these astringent, and styptic articles, may also be used as a snuff. If the bleeding parts are not beyond the reach, the common *puff-ball*, if applied, will generally stop the bleeding. The clothing around the neck, should always be loose on those persons that are subject to bleeding from the nose.

BLEEDING FROM THE STOMACH.

(*Hæmatemesis.*)

Bleeding in the stomach is generally attended with a small contracted pulse; palpitation; a pale contracted countenance; weakness, and a sense of constriction in the breast; extreme anxiety; faintness; and vomiting of blood. The blood thus thrown up is generally of a dark, or black inky appearance, and is sometimes in coagulated clots.

Treatment.—When there is much sickness at the stomach, the treatment should be commenced by giving an emetic of equal parts of bayberry bark, and lobelia; and while this is operating, the patient, if he is able to sit up, should have his feet and legs in a tub of water as hot as it can be borne. In the meantime, strong frictions, with the use of the rubefacient solution, or bathing drops, should be applied. As soon as the stomach is relieved from the accumulated blood, (which if not removed, will by its nauseating effects, keep the stomach in a relaxed condition and thus favor the bleeding,) our best astringents should be used freely, in decoction or strong infusion. The astringent tonic compound, is a very good preparation for this purpose; an ounce of it should be scalded in a pint of water, and drank freely when cold. A tablespoonful of cranesbill, in fine powder, stirred into a tea cup full of cold water, and drank down at two or three doses, will generally stop the bleeding. But if the articles here recommended are not at hand, any other good vegetable astringents may be used.

In the treatment of bleeding from the stomach, as well as that of any other hæmorrhage, such means as are calculated to equalize the circulation should be early instituted. The vapor bath stands at the head of all these, but it is not generally necessary; frictions and rubefacients, together with the foot bath, will generally be sufficient.

BLEEDING FROM THE URINARY ORGANS.

(*Hæmaturia.*)

It is sometimes a matter of considerable difficulty to determine whether the blood passing off with the urine comes from the urethra, bladder, ureters, or the kidneys. When the blood is discharged more slowly, and constantly, and especially, if it is unmixed with urine, and there be no effort to void it, we may calculate that it rises from the urethra. When the bleeding occurs in the bladder, there is generally an uneasiness, and often a pain in the part, more usually in the neck of the bladder, the blood in this case comes away with the urine, but still it is not intimately mixed with the latter.

In hæmorrhage from the ureters, or the kidneys, the blood is always uniformly mixed with the urine, giving the whole

a bloody appearance. There is also most generally a pain or uneasiness in the region of the kidneys.

Treatment.—In the management of bleeding from the urinary organs, we find large doses of cayenne pepper and bay berry, if often repeated, to answer a very good purpose. The witch hazel, cranesbill, white pond lilly, or indeed any other good and active astringent, if combined with a permanent stimulent, will do well.

The bearberry has long been extolled in cases of bleeding from the kidneys. A strong infusion of peach leaves, will be found to answer perhaps a better purpose, than any other single article, that can be used for this complaint.

Frictions, and rubefacients, should be perseveringly used, and even the vapor bath, if necessary. Bathing the feet while internal means are used, is a good practice.

Uterine hemorrhages, are treated on the same general principles that govern our practice in bleeding from the urinary organs, with the addition of astringent infusions, or teas, to the parts by means of injections.

BOILS.

(*Ferunculus*.)

Boils are very troublesome, inflammatory, hard, and circumscribed tumors, that occur in the soft parts on the exterior of the body, and are apt to suppurate. Their character being so well known, needs no further description.

Treatment.—In the first stages, while the inflammatory action increases, a poultice made of fine slippery elm bark and lobelia seed, well pulverized, is perhaps a better application than any other that can be made. Wheat flour and honey, mixed into a paste and applied, is highly recommended by some; but is not so good as the above.

If these means are instituted early, the tumor may be discussed, and suppuration may be prevented. But should pus be collected, the pain, by lancing the tumor as the matter approaches the surface, may be relieved a day or two earlier than would otherwise happen.

After the boil is open, it should be poulticed with astringent articles. For this, the following is very good:

Take of Astringent tonic compound,.....	one part.
" Slippery elm flour,.....	one do.
" Ginger,.....	half do.
" Wheat, or rye flour,.....	half do.

Mix up with boiling milk, or water, and apply warm. As soon as the core comes away, after washing it well with an astringent wash, the healing salve may be applied, and continued until the sore is healed. During the treatment, the sore should always be well washed with soap suds, at the time of dressing.

Boils, on some persons, are of frequent occurrence, and often two, or three, or even half a dozen, make their appearance at one time, and as they heal up, new ones come on. Such persons need constitutional treatment. A course of laxatives should be instituted. For this purpose a decoction may be made by boiling together equal parts of yellow dock root, yellow parilla, sassafras bark, and dried mayapple root, in a sufficient quantity of water to cover the ingredients; straining and boiling down to half the quantity, and adding an equal measure of molasses. This should be taken in table spoonful doses, three times a day, or often enough, to keep the bowels gently open, until the boils disappear. One or two of the anti-billious pills, taken every other evening, will do very well, to improve the condition of the blood in these cases.

Dr. Thomson recommends the application of turpentine, when the boil first makes its appearance, and states, that it soon disperses it.

BURNS AND SCALDS.

(*Ambustio.*)

These accidents are of frequent occurrence, especially among children, and are always troublesome, owing to the excruciating pain that attends them.

Burns and scalds, have always been dreaded, not only on account of the pain they produce, but the difficulty that has attended their cure. The reformed treatment has, however, modified the unnecessary fears and anxiety on this score.

Burns are now viewed more in the light of a common injury, or wound. Nevertheless, these injuries are still more slow in their recovery, than common wounds: for while in the latter, there is simply a solution of continuity in the parts, and consequent obstruction of the physiological (*natural*,) functions: in burns, besides all this, there is always a deadened state, or destruction of the parts, corresponding with the intensity or character of the injury. Thus in their recovery, *time* is always necessary, to restore vitality in the deadened parts, or to restore such parts as are entirely destroyed.

An idea has obtained among the people generally, that the *fire* is retained in the parts, after the accident, and that the smarting, and pain, peculiar to injuries of this kind, is owing to this circumstance. But this is a mistaken notion, and cannot be sustained by philosophy.

Free caloric (*fire*,) is unconfined in character, and always seeks an equilibrium. Thus the most solid substances, when heated, as for instance a block of iron, although its temperature may be raised to a red heat, yet it will in a short time be of the same temperature of the surrounding medium. It is evident, therefore, that the fire or heat, during the occurrence of accidents of this kind, is not retained long enough, to found a rational conclusion, that it is the immediate cause of the pain. Moreover it is known that the addition of heat, although augmenting it for a few moments, will even favor the early subsidence of the pain; and thus we find the practice common among some people, in small burns, in which the experiment is tolerable, to expose the injured part before the fire, as near as can be borne, for three or four minutes, when the pain will entirely cease and return no more.

The pain evidently arises from the injury that the nerves sustain during the cauterizing (*burning*,) process. It seems that the nerves are capable of considerable resistance, and that they retain their sensibility even after some other tissues are broken down or destroyed, and being thus exposed, are subject to causes of extreme irritability.

Treatment.—The irritability, and consequent pain, may be successfully relieved by the application of cold water. If the injured parts be on the extremities, they may at once be immersed into a vessel of water; but if the part cannot thus be relieved, cold water may nevertheless be applied by means of wet cloths; which may be kept cool by means of a sponge, or by carefully pouring on fresh water occasionally. As soon as the parts remain easy while out of the water, the dressing should be put on, which should be done as follows:

Spread on a fine muslin cloth, large enough to cover the burn, a coat as thick as a knife blade, of the lime cerate, and apply it over the injured part, being careful not to break the blisters, unless they are too large, in which case they may be punctured at their margins. Now if it be convenient, a piece of oiled silk, may be applied over this first plaster: if not, it may be wrapped up in light cloths, and suffered to remain for at least six hours. This preparation may be continued, until the parts are restored: or it may be alternated, or even superseded, by the other articles recommended for burns, among the compounds. Care must always be taken, at the dressings, not to break the blisters, or to irritate the sores, nor yet expose the latter too long to the air. Sweet oil may be poured over the sore, to exclude the air and prevent the dressings from adhering too firmly.

Sweet oil and the balsam of fir, mixed in the proportion of two parts of the former to one of the balsam, forms an excellent liniment for burns and scalds.

Elder bark, simmered in fresh butter for several hours, imparts to the latter a property very soothing and healing to abraded, as well as burned surfaces.

Should inflammation set in at any time during the treatment, relaxant poultices must be applied until the inflammation subsides, when the salves may again be applied.

A poultice made of one part of lobelia herb, in powder, and two parts of slippery elm flour, is an excellent application for inflamed sores of any kind, and may be used with confidence in these cases.

Should unhealthy granulations, usually called *proud flesh*, get into the sore, they may be removed by sprinkling on them some powdered blood root, or burnt alum: or should this not answer, a little caustic potash may be applied to these points. Then after the sore is washed out with soap suds, or some astringent tea, the salve may be again resumed, or should the poultices be needed they must be applied.

Should the sore grow foul, it should be corrected by the use of pyrolignious acid, or chloride of lime, which see. If mortification should supervene, the treatment recommended for that, should be instituted.

Internal remedies.—If the burns, or scalds, be extensive, internal remedies become necessary. There is always a shivering, and trembling, accompanied with difficulty of breathing, experienced by the patient, in severe, or extensive burns. To remedy this, a tea made of ginger and sculcap, a tea spoonful of each, scalded in a pint of water, and sweetened, or of

cayenne pepper and lady slipper, prepared in the same way, is very good. A half tea spoonful of cayenne pepper, and a tea spoonful of lady slipper, stirred into a glass of wine, sweetened with loaf sugar, and drank at two or three doses, is also very well calculated to sustain the system under so severe a shock. If there be sickening at the stomach, it is often the case, nothing short of an emetic will relieve it. Some essence of peppermint, or a little vinegar, may, however, sometimes do some good. The bowels should be kept open by mild laxatives, or injections.

CANCER.

(*Carcinos.*)

Cancer is a disease that has inherited its name from the ancients, who fancied that the large blue veins of the tumor, resembled the claws of a crab. It is likewise called *carcinoma* or *carcinos*, by the Greeks, and *Lupus* by the Romans, because it eats away the flesh like a wolf. Dr. Cullen defines it a painful scirrous tumor, terminating in a fatal ulcer. "Any part of the body may be the seat of cancer, though the glands are most subject to it. It is distinguished according to its stages, into *occult* and *open*; by the former is meant its scirrous state, which is a hard tumor that sometimes remains in a quiet state for many years. When the cancerous action commences in it, it is attended with frequent shooting pains; the skin that covers it becomes discolored, and ulceration sooner or later takes place: when the disease is denominated open cancer. Mr. Pearson says, 'When a malignant scirrous or a watery excrescence hath proceeded to a period of ulceration, attended with a constant sense of ardent and occasionally shooting pains, is irregular in its figure and presents an unequal surface, if it discharges sordid, sanious or foetid matter; if the edges of the sore be thick, indurated, and often exquisitely painful, sometimes inverted at other times retorted, and exhibit a sorrated appearance: and should the ulcer in its progress be frequently attended with hemorrhage, in consequence of the erosion of blood vessels; there will be little hazard of mistake in a cancerous ulcer.' In men a cancer most frequently seizes the tongue, mouth, or penis; in women the breasts, or uterus, particularly about the cessation of their

periodical discharges: and in children the eyes. The following description of scirrhus and cancer, from the above writer will serve to elucidate the subject. A hard unequal tumor that is indolent, and without any discoloration of the skin, is called a scirrhus: but when an itching is perceived in it which is followed by a pricking, shooting or lancinating pain, and a change of color of the skin, it is usually denominated a cancer. It generally is small in the beginning and increases, gradually; but though the skin changes to a red or livid appearance, and the state of the tumor from an indolent to a painful one, it is sometimes very difficult to say when the scirrhus really becomes a cancer, the progress being quick or slow according to concurring causes. When the tumor is attended with a peculiar kind of burning, shooting pains and the skin hath acquired a dusky purple or livid hue, it may then be deemed the malignant scirrhus, or *confirmed cancer*. When thus far advanced in a womans breast, the tumor sometimes increases speedily to a great size, having a knotty unequal surface, more glands becoming obstructed, the nipple sinks in, turgid veins are conspicuous, ramifying around, and resembling a crab's claws. These are the characteristics of an occult cancer on the external parts; and we may expect the existence of one internally, when such pain and heat as has been described, succeed in parts where the patient hath before been sensible of a weight and pressure, attended with obtuse pain. A cancerous tumor never melts down in supuration like an inflammatory one; but when it is ready to break open, especially in the breast, it generally becomes prominent in some minute point, attended with an increase of a peculiar kind of burning, shooting pain, felt before at intervals in a less degree and deeper in the body of the gland. In the prominent part of the tumor, in this state a corroding ichor sometimes transudes through the skin, soon forming an ulcer: at other times a considerable quantity of a thin lymphatic fluid tinged with blood from corroded vessels is found on it. Ulcers of a cancerous nature discharge a thin fœtid acrid sanies, which corrodes the parts, having thick, dark colored, retorted lips, and fungous excrescences frequently rise from these ulcers, notwithstanding the corrosiveness of the discharge. In this state they are often attended with excruciating, pungent, lancinating, burning pains, and sometimes with bleeding.

Though a scirrhus may truly be deemed a cancer as soon as pain is perceived in it, yet every painful tumor is not a cancer; nor is it always easy to say whether a cancer is the disorder or not. Irregular hard lumps may be perceived in

the breast; but on examining the other breast, where no uneasiness is perceived, the same kind of tumors are often found which renders the diagnostic uncertain. Yet in every case after the cessation of the catamenia, hard, unequal tumors in the breast are suspicious: nor, though without pain, are they to be supposed indolent or innoxious."

Treatment.—A variety of plans have been proposed, for the treatment of cancer. Alteratives, depuratives, and cathartics, internally; emollients, discutients, and caustics, externally, are among the common means in popular use, for the cure of this distressing complaint. Among the Allopathic physicians, excision with the knife is considered the only certain remedy. But unfortunately, in true cancer, the best of treatment has in many instances proved unavailing: even the dreadful operation with the knife, too often fails to confirm the expectations of the unhappy sufferer. If the cancerous disposition of the system is not obviated, or corrected, local means will be of but little avail. The writer has known a number of cases of cancer in the female breast, in which the tumor was entirely cut away, and in which the sore no sooner got well, than all the usual and dreadful symptoms of cancer reappeared.

Constitutional Treatment.—The alterative syrup should be taken three times a day, in such doses as may be agreeable with the stomach. In the mean time, pills composed of equal parts of mandrake, narrow dock, and dandelion, should be used in quantities sufficient to keep the bowels gently open. The formula given among the compounds, under the head of "*Dock Extract*," will answer very well for this purpose.

In stubborn cases, in which the general system is much affected, the vapor bath may be necessary, and emetics may also prove beneficial.

Local Treatment.—If the treatment is commenced, while the tumor is in the scirrhus stage, efforts should be made to discuss it. For this purpose the iodine ointment should be applied, with friction, over the tumor. If the iodine preparation is not at hand, an ointment made by rubbing together two parts of stramonium ointment with one part of the extract of bitter-sweet, may be used in its stead.

Should this treatment prove unsuccessful, the tumor should be opened by means of the application of a little caustic potash to the crown, or most projecting part. Should the first application of the potash not corrode the skin, it

should be renewed when it quits smarting, until the tumor is well opened. During the time the caustic is used, a poultice of carrots, or what is better, one made of the roots or tops of narrow leaved dock should be worn over the entire tumor.—As soon as the tumor is well opened, after washing it out well with soap suds, or some astringent tea, the cancer plaster should be applied, and continued (renewing it every day,) until the sore begins to discharge healthy pus, when it may be treated with the healing salve, or stramonium ointment until well.

The local treatment of an open cancer, after being well cleansed, or washed out, may be commenced immediately with the cancer plaster, and treated afterwards in the same way that is here recommended for cancer in the scirrhous state, after it is opened by the caustic.

The sore should be well washed out at least once a day, with a decoction or strong tea of pipsiswae, beach drops, bayberry, or thoroughwort. After the sore is thus washed out, enough pyrolignious acid to wet it all over, should be applied by means of a soft brush.

The following treatment of cancer is very similar to a recipe that the writer finds in his Journal, which was formerly known as "*Thom. Runnel's cure for cancer.*" This plan of treatment has of late gained considerable popularity in this part of the country, in the hands of a certain Mr. White, who has repeatedly (as the writer is informed,) sold the recipe for several hundred dollars; at the same time binding the purchaser not to divulge the secret, under a heavy penalty. As this treatment has proved very successful in the hands of a friend of the writer, he has thought it advisable to publish it, although it embraces several objectional articles: yet as they are not to be used internally, they are not so likely to do mischief.

If the cancer be in the scirrhous state, and cannot be discussed by proper treatment, it should be opened with potash or any other good caustic; and the integuments (skin,) carefully removed. The tumor is now ready to be treated the same as an open or running cancer. This is commenced by the application of a plaster made by melting together equal parts of rosin, beeswax, and mutton tallow, adding enough sulphate of copper (verdigris,) to give to the plaster a deep green color. The plaster should have a hole cut out of its center, corresponding with the size of the opening in the tumor. A few grains of the sulphate of zinc (white vitriol,) should now be sprinkled over the surface of the sore, and repeated three times a day until the whole tumor comes out in a dead black

mass, or all the unhealthy parts are sloughed off. When the sulphate of zinc is applied, the opening should always be covered over with a plaster of the same kind as applied before.—When the tumor is thus destroyed the sore should be healed up as above directed. During the whole of this treatment, proper constitutional treatment must not be neglected.

CARBUNCLE.

(*Anthrax.*)

A carbuncle is a hard and circumscribed inflammatory tubercle, like a boil, usually occurring on the face, neck, or back, and is much disposed to terminate in mortification. These tumors are exceedingly painful, and discharge very fœtid, bloody matter. In the center of the tumor is a black core, which has been likened by the ancients, to a burning coal, consuming the surrounding parts, and hence its name.

Treatment.—Caustic potash should be applied by means of a pencil, over the crown of the tumor, and then a poultice of lobelia seed, and slippery elm, should be laid over the whole tumor, and suffered to remain for five or six hours. If on the removal of the poultice, the sore should present a healthy appearance, the poultice may be discontinued, the sore dressed with salves, and treated in other respects like an ulcer. But until the tumor presents a healthy appearance, the use of the potash should be continued at each dressing. Should mortification set in, it should be treated as recommended under that head.

CHICKEN POX.

(*Varicella.*)

This disease, unlike small pox, is seldom attended with much fever, and hardly ever continues more than from one to three days before the versicular eruption, which usually comes out

first on the breast and back, makes its appearance. An unpleasant tingling, or itching in the skin, generally accompanies the eruption. The vesicles generally come out in succession, during three or four days, so that at the same time, some will be just appearing, while others are matured and drying into scabs. The eruption of chicken pox varies somewhat in appearance, and hence the affection has inherited the names *Cuticular*, *Conoidal Varicella*, and *Swine Pox*. Chicken pox, very seldom makes its appearance more than once in the same individual.

The diseases which this resembles most, are small pox, and varioloides, or modified small pox. From the first of which it may be distinguished by the comparatively slight fever; by the eruption appearing first on the back; and by the comparatively short duration of chicken pox. From modified small pox, or varioloides, it is more difficult to be distinguished. It may be observed, however, that the eruption of varicella is more vesicular, having quite a bladder of water on the crown of the pustule, which is nearly transparent at first, but subsequently assumes a sero-purulent character, while those of varioloides are more pustular, and commonly depressed in their centers.

Treatment.—Chicken pox usually passes over without making medical treatment necessary. But when it is thought advisable to do something in this way, some mild detergent and diaphoretic preparations, such as pennyroyal, saffron, catnip, or thoroughwort, may be used in the form of a tea, bearing in mind also the importance of keeping the bowels open by the use of aperients or laxatives.

CHILBLAINS.

(*Pernio.*)

Chilblains are sores arising, as is supposed, from freezing or the effects of cold, and are most apt to affect the feet, particularly the heels, and toes. The parts affected have a purpleish, or red color, and are most generally somewhat swollen. At times, the diseased parts itch intolerably, especially when warmed by the fire. The parts, if neglected, are apt to ulcerate and thus become very troublesome.

Treatment.—The difficulty, when of a slight character, may be removed by bathing the feet every evening before going to bed, in fresh, cold water, and after wiping them dry, rubbing on a little of the bathing drops. Should the parts be much inflamed, and sore, they should be poulticed with slippery elm and ginger. When they ulcerate, they should be treated as directed for ulcers.

CHOLERA, ASIATIC.

(*Cholera Asiatica.*)

“The Asiatic or spasmodic cholera first made its appearance in Hindostan in 1817, and spread slowly through Arabia, Persia, Russia, Poland, and Germany, arriving in England in 1831, and making its way into Canada and the United States the following year. It is sometimes very sudden in its attacks, the patient being immediately prostrated by copious watery evacuations from the bowels. Usually, however, it is preceded for a few days or a week by languor, giddiness, pain and rumbling noise in the bowels, headache, diarrhœa, cramps of the fingers and toes, numbness of the limbs, and sometimes nausea and vomiting. As soon as the disease is fairly established, the strength of the patient fails very rapidly, in consequence of the profuse alvine discharges, which resemble rice water. These are accompanied with giddiness, ringing in the ears, imperfect vision, violent vomiting, burning pain at the pit of the stomach, thirst, restlessness, and cramps or spasms of the legs or thighs, which sometimes extend to the whole body. The eyes are sunken, and the countenance pale and cadaverous. The skin becomes cold and clammy; loses its elasticity, falls into wrinkles upon the hands and feet, and acquires a livid, or bluish color.

The breath is very cold, indicating in some instances, according to Professor Espy, a temperature of only 60 degrees. The liver is extremely torpid, so that no bile makes its appearance in the stools. The urine also is scanty, or dried up. The mind is rarely affected, and the patient continues to talk rationally until a short period before his death. In some cases, the vomiting and spasms do not occur.”—(*Mattson.*)

Treatment.—In the incipient or forming stages, all that may

be necessary, is to drink freely of the cholera syrup or even the compound tincture of myrrh. But in more violent cases, a prompt and energetic treatment is required. The anti-spasmodic tincture should be used in table spoonful doses, until the stomach is well cleansed and the urgent symptoms give way. In the mean time the rubefacient oil, or the bathing drops should be applied with violent friction. These means are eminently calculated to relieve the cramp and vomiting, as well as the purging, by quieting irritation, and changing the termination of the secretions.

Cholera syrup, and cayenne pepper, are important articles in the treatment of this dreadful complaint, and should be freely used during the entire treatment. Charcoal, pepper sauce, neutralizing mixture, and the essence of peppermint are also valuable auxiliaries in the treatment.

Injectiōns.—Enemas composed of a strong infusion of the astringent tonic, with the addition of a table spoonful of the compound tincture of myrrh, and as much of the nervine tincture to every injection should be used with promptness, until the urgent symptoms are relieved. The bitter tonic should be used during the recovery.

CHOLERA OF CHILDREN.

(*Cholera Infantum.*)

Children are frequently much troubled with vomiting and purging, particularly during the time of teething. The discharges are generally thin and watery; sometimes bilious. There is generally more or less fever and emaciation. The disease often assumes a chronic character.

Treatment.—If the stomach is very irritable, and there is much vomiting, the treatment should be commenced with the exhibition of a lobelia emetic. During, and after the operation of the emetic, mild diaphoretic tea, sweetened and creamed, should be given in suitable doses, every half hour, until it relieves the bowels, when if the looseness is not checked, some astringent tea should be given per stomach, and by injection. The neutralizing mixture in this complaint is excellent.

CHOLERA MORBUS.

Symptoms.—Violent vomiting and purging, with cramp in the bowels, and muscles of the legs; discharges mostly thin and watery, and often mixed with bile. The extremities are mostly cold, and the pulse weak and irregular. Cholera Morbus is a violent disease, and often terminates in death within ten or twelve hours.

Treatment.—For cholera morbus, the same treatment recommended for the Asiatic cholera is, perhaps, as good as any other that can be adopted for this complaint, which is very analogous to it in all its symptoms. It is proper, however, to remark here, that the vapor bath will be found indispensable in cases of collapse and violent cramp. Steaming bricks, or stones placed to the bowels, will likewise be found very serviceable. In cases of great irritability of the stomach, it happens sometimes, that nothing will answer better than fine charcoal taken in milk.

CONSUMPTION.

(*Phthisis Pulmonalis.*)

Consumption of the lungs is one of the most prolific sources of mortality to the human race. It has been estimated that in Europe one fifth of the annual number of deaths, take place from this disease; and we have woful evidence that the proportion is not much less in America.

In New York, the average number of deaths by consumption, is computed at 243 in 1000, which is nearly one fourth. The city inspector in his report for the year 1839, makes the whole number of deaths 7953, of which 1315 died of consumption, 460 of inflammation of the lungs, 36 of inflammation of the chest, 28 of bleeding from the lungs, 28 of congestion of the lungs, and 72 of bronchitis—total 1939.

Various morbid conditions of the lungs, as well as other contiguous organs, are known to the people under the name of *consumption*. Ulcerations of the larynx and trachea, as well as inflammation and serous effusion, or ulceration of the

pleura, &c., are most generally confounded with true consumption of the lungs. Again, real consumption, as discovered by *post-mortem* examinations, evinces several different pathological or diseased conditions of the lungs. Thus we have the *imposthumous* variety, or consumption from abscess of the lungs, (which has been erroneously considered the most common kind,) the *granular*, or that variety arising from the formation of an immense number of granulations, of about the size of a millet seed, or larger; and finally the *tubercular*, or consumption arising from tubercles in the lungs. This last is the most unmanageable and fatal form of consumption. The tubercles at first are small, and sometimes many in number, but as the disease advances they enlarge, and thus adhere together. Sooner or later, these tubercles commence softening in their centers, and are thus finally converted into a cream-like matter, which is either absorbed, or continues to accumulate until it finds its way into the bronchia, or air tubes of the lungs, when it is carried off by expectoration.

Symptoms.—Among the first signs of consumption, are increased sensibility to the effects of cold; slight and transient pains in the breast, or side; a feeling of soreness in the lungs, and a short dry cough. As the disease advances, the cough increases and is accompanied with expectoration of phlegm or mucus. There is more or less fever through the day time, and sweating at night. Usually there is, also a burning sensation experienced in the palms of the hands, and soles of the feet; and, generally, the patient wears a marked blush on the prominence of the cheeks. There is in this stage, an extreme liability to catarrh, on the slightest exposure to cold or damp air.

In the confirmed stage of consumption, the fever assumes a hectic form; the sweating at night becomes more profuse and clammy; and the patient becomes considerably emaciated. The matter thrown up from the lungs, consists of pus mixed with mucus, which is sometimes streaked with blood.

In the last stage of this complaint, all the symptoms become more aggravated; the strength fails rapidly; the emaciation becomes extreme; the cough very distressing; the pulse, during the fever, sometimes as high as 130, the voice is hollow or sepulchral; dropsical symptoms set in, and finally the patient is either carried off by a colliquative diarrhea, a hemorrhage from an ulcerated vessel, or sinks gradually under the weight of the disease.

A remarkable circumstance, peculiar to consumptive habits, is the singular confidence and hope of recovery, that the pa-

tient evinces, even sometimes in the very last stage of the complaint. Some patients are even offended with their friends when it is urged by them that their health is declining.

Treatment.—The writer has never found any treatment for this complaint, more prompt and certain in its effects, than repeated courses of the vapor bath and emetics of lobelia. This plan of treatment is eminently calculated to keep the circulation equal and free through the whole system, which is a great desideratum. Nor are these means any less calculated to cleanse the system from impurities, which is so very important to the healing of the lungs. The stomach, which is the fountain of the secretions, is kept in a clean and healthy condition by the frequent use of emetics; and the purity, and free circulation of the blood, which is likely to be constituted of healthy materials, owing to the healthy condition of the digestive organs, is preserved by means of the baths. The healing of the lungs, which are thus supplied with good and healthy blood, is hence very much favored by those means. In addition to all this, the alternate relaxation and contraction, caused by the various means used in this process of treatment, is remarkably calculated to disengage and remove the accumulated impurities and dead matter from the lungs.

This course of treatment should be commenced in the morning, or fore part of the day, and should be administered in the following way: first, let the patient drink a cup of diaphoretic tea; then, having in the mean time made the preparations, place the patient over the vapor bath, and let him remain, if comfortable, until free perspiration takes place, when he should be wiped with a dry towel, and placed in a warm bed. In the second place, as soon as the patient is put to bed, he should have placed to his feet, a steaming brick or stone, and should have a good emetic of lobelia, prepared in a tea of the astringent tonic compound. The emetic should be given in three equal portions, 10 or 15 minutes apart. During the operation of the emetic, the patient should drink freely of a tea made of equal parts of thoroughwort and diaphoretic powders. As soon as the patient is done vomiting, he should be wiped with a rough towel, and have a good coat of stimulating liniment over the entire body. This course should be repeated two or three times a week, according to the urgency of the symptoms, until the disease is broken up.

During the above treatment, the patient should take a dose of the balsam of wild cherry, three times a day; and also a tea spoonful of the expectorant powders, every morning and evening. The expectorant syrup is also a very good article

to be taken during the treatment of consumption. Water that has been boiled with tar, has been found beneficial in tubercular consumption.

As soon as the disease begins to give way, the bitter tonic should be used, once a day, until the patient is entirely restored.

During the treatment, the greatest care is necessary, to avoid exposure, as the patient is extremely apt to take relapses, and thus in a short time, all that has been gained by the treatment may be entirely lost.

CORN.

(*Clavus.*)

Corns are roundish, hard or horny extuberances in the *cutis* or outer skin, situated on the joints of the toes, and other parts of the feet, that are much exposed to friction and pressure.

Treatment.—As the difficulty is obviously caused by tight shoes, the remedy readily suggests itself,—*wear loose shoes.* The cure may, however, be facilitated by soaking the feet in warm water with some ashes, until the corns are softened, when they should be raised out with the point of a penknife. The toe should now be wrapped up with a piece of soft bladder or suet skin, dipped in rattlesnake's oil, or any other soft oil. But unless the precaution of wearing loose shoes be observed, it will be in vain to expect a cure of corns.

COSTIVENESS.

(*Constipation.*)

Constipation of the bowels, although a common affection, seldom occurs without the existence of some other derangement. It most commonly attends inflammatory affections of

the liver, brain, stomach, and bowels, and it is one of the marked symptoms of dyspepsia.

Among the most common symptoms, collateral with constipation, are sickness at the stomach, want of appetite, flatulency, headache, fever, general dullness and dejection of spirits.

Treatment.—Constipation will be found, generally, to yield to the appropriate treatment of those diseases that give rise to this complaint. But in confirmed cases, however, it becomes necessary to do something that is more directly calculated to relieve this state of the bowels. For this purpose, whatever can be effected by way of dieting, should be done; for it is not a good practice to use much cathartic medicine for this purpose. Most articles of this class, are apt to leave the bowels in a condition little better than they find them. Moreover, purgative medicines, if much used, are almost certain to injure the digestive organs, and thus they ultimately, very much increase the difficulty. In mild cases, the patient will generally be able to keep the bowels in a proper condition by the use of ripe juicy fruit, such as peaches, &c. The Graham or unbolted bread, is also eminently adapted to costive habits. With some, potatoes, if used once or twice a day as food, will keep the bowels in a free and healthy condition. Pepper sauce, used at the table, will be found serviceable to those troubled with weak digestive organs.

In obstinate cases, a more active course will sometimes be required. The bowels should, in the first place, be moved by injections, made of the laxative bitter tonic, with the addition of a small portion of cayenne pepper; they may then be restored to their healthy action, by the free use of the laxative bitter tonic, in the form of tea. But should this not be sufficient, pills composed of equal parts of cayenne pepper and the alcoholic extract of mandrake, taken every evening, in doses of from one to three, will soon bring the bowels in a soluble and free condition. The patient may then gradually leave off their use, and follow them with the use of bitters that are slightly laxative.

COUGH.

(Tussis.)

Coughs are of very common occurrence, and generally arise from colds; but are sometimes a symptom of a more serious complaint; such as consumption, affection of the liver, pleurisy, &c. In some instances the cough is dry, but in others it is accompanied with an expectoration of matter. Coughs are not generally much regarded, unless they are severe, or of long standing.

A spasmodic and contagious cough, called *Whooping Cough*, is common among children, which will be treated of under another head.

Treatment.—The disposition to cough, arises from irritation in the air passages of the lungs. This irritation is caused by the collection of matter that is inimical to the parts; and hence the propriety of using such remedies as are calculated to promote the expectoration or removal of the offending materials. For this purpose, either of the expectorant preparations, recommended among the compounds, may be used. When the cough is very severe and harrassing, an emetic of lobelia, or a vapor bath, may be necessary, in connection with the other remedies, to relieve the cough. The foot-bath, and any other means calculated to relax the system, will be found serviceable.

CRAMP.

(Spasmus.)

Cramp is a very painful affection, but is not generally dangerous. It usually affects only a part of the body at a time, as for instance, the leg, foot, fingers, the stomach, &c. The affection consists of a spasmodic contraction of one or more muscles of a part, thus forcibly drawing the part crooked, or out of the natural position, thereby causing extreme pain.—When the cramp or spasm is attended with rigidity, or permanent tensity of the muscles, the affection is called *tetanus*, or locked jaw, which will be treated of under a different head.

Treatment.—Friction, if rapidly applied to the affected muscles, will generally give immediate relief. Cramp may also generally be relieved by contracting the muscles, antagonistic to those affected.

If medicine should be required, a good dose of the nervine tincture, or of the anti-spasmodic tincture, will generally give relief in a short time. Tincture of camphor, asafœtida or cayenne pepper, will generally answer very well. In violent cases, if the cramp should not yield to the means here recommended, the tepid, or vapor bath should be applied in addition to the means here recommended. Persons that are much troubled with cramp, should avoid exposure to wet and cold, and should occasionally drink of a tea of blue cohosh, scullcap or valerian.

CROUP.

(*Cynanche Trachealis.*)

The croup is an inflammatory affection of the mucus membrane of the trachea, or windpipe, which is attended by a secretion of very tenacious coagulable lymph which lines the windpipe, and sometimes also the bronchia or air cells of the lungs, and thus impedes the functions of respiration or breathing. In some instances, the breathing becomes very difficult, and is attended with a crouping noise; hence the name of the disease.

The disease chiefly attacks young children, yet it is sometimes met with among children as old as 12, and 14, and it is said, that even adults have been known to have it. Its attack is sometimes very sudden,—young children sometimes die from it within six or eight hours.

Symptoms.—Some days previous to an attack of croup, the child will be fretful, and at times drowsy, and inactive; the eyes are somewhat suffused and heavy, and there is a cough, which from the first, has a peculiar shrill sound. As the disease advances, the cough increases in violence, and respiration becomes more difficult; the face is flushed, and swelled, the pulse frequent; and the skin hot. At length the obstruction in the trachea, becomes so great, that the patient labors convulsively for breath, and occasionally, during the fits of cough-

ing, will perhaps throw up detached pieces of the *false membrane*; the face turns purple, or black; the breath is taken at longer intervals, the extremities grow cold, and the little sufferer sinks in death.

Treatment.—The patient should immediately have a dose of the tincture of lobelia, and be placed in a warm bed, with a steaming stone to the feet. Stimulating liniment, or if this is not at hand, the bathing drops should be applied, by the warm hand, with considerable friction. The tincture of lobelia, which may be given in honey or molasses, should be given, as often as once in every 10 or 15 minutes, until the breathing becomes easy, when it may be given at longer intervals.

In bad cases the lobelia should be given in doses large enough to produce vomiting, and the emetic effect should be reproduced, at short intervals, until the patient is out of danger. The tepid bath is also very serviceable, and should not be neglected if the disease proves stubborn.

The oxymel of lobelia is an excellent article in croup, and may be used during the intervals between the times of vomiting.

Seneka snake-root has also been found useful in this complaint, and may be combined with the lobelia, when used.

In some cases the lobelia seems to do best when given with an astringent tea, and hence, with a view of disengaging the membranous coating of the trachea, a tea of the astringent tonic may be used to mix up or prepare the lobelia in, seeing that the astringents, being accompanied with lobelia, will not be likely to retard expectoration.

DEAFNESS.

(*Paracosis.*)

This difficulty is occasioned by any thing that proves injurious to the ear, as loud noises from the firing of cannon, colds that affect the head violently, inflammation or ulceration of the internal ear, hard wax, foreign obstructions, as insects, &c., and paralysis of the auditory nerve. It may also arise from some congenital or original defect in the structure of the ear.

Treatment.—When deafness is caused by defects in the struc-

ture of the ear, little hope of a remedy can rationally be entertained. When it follows as a sequela of some of the eruptive diseases, as scarlet fever, or measles, which is often the case, it likewise seldom admits of a cure.

In cases of deafness that arise from hardened wax, the use of a few drops of olive oil, or some warm tincture of lobelia thrown into the ear by means of a syringe, will generally remove the difficulty. Insects, when they get into the ear, may sometimes be removed by dropping in some anti-spasmodic tincture, or tincture of camphor, once in a few hours.

Inflammations in the ear must be treated with stimulating relaxant poultices, and liniments to the external parts, while other means designed to equalize the circulation, such as diaphoretics, baths, &c., are used collaterally. The proper means in paralytic affections of the nerves of the ear, are so far as the general treatment is concerned, about the same as in other cases of nervous paralysis. The local means should consist of frictions with the rubefacient oil, or bathing drops, around the external ear, and the angles of the jaw. Anti-spasmodic tincture, or tincture of cayenne pepper, dropped into the ear, will likewise be serviceable.

DELIRIUM TREMENS.

(*Mania a Potu.*)

This is a species of delirium peculiar to those addicted to the use of spirituous liquors, or opium. The affection, however, it seems, does not generally arise from regular habits of intemperance; but rather from the sudden disuse of the accustomed stimuli.

Symptoms.—The delirium is preceded by indisposition, lassitude, watchfulness, headache, loss of appetite, and nausea. There is great restlessness, and want of sleep, with an anxious expression of the countenance, and as the fit comes on, a tremor commences,—first in the hands. “The countenance exhibits an expression of alarm and suspicion. the eyes are cast about with quick and scrutinizing glances, or often fixed, apparently upon some object that attracts the attention for a moment, and then quickly withdrawn; the tremor of the hands increases; the patient becomes irritable, and sometimes irasci-

ble; he is extremely restless, walks continually to and fro, and is wholly unable to obtain a moments sleep. He now begins to manifest mental disorder, becomes loquacious, says he feels well, and is tormented with a more or less continued succession of various alarming, disgusting, and ludicrous *apparitions*. He fancies that he sees dogs, snakes, cats, mice, and other animals in his room, and disgusting vermin crawling over the bed, and on his clothes, or that various persons have entered his room, for the purpose of robbing, killing, or annoying him. To avoid these and other horrid illusions, he often calls out loudly for assistance; runs to the door to make his escape, or to the window to leap out; is greatly agitated, vociferates, threatens, and sometimes raves violently. Sometimes he fancies that he hears loud and strange noises around him, overhead, in an adjoining apartment, or loud and frequent knocking at the door. His mind and body are in a continued state of action; he calculates, projects, walks hurriedly about the room, picks up money, runs up to the window, and calls out to some imaginary person in the street, starts with terror and agitation from the presence of frightful and disgusting apparitions, insists that he is well, and confined with some sinister intentions against him, and requests to be suffered to go out in pursuit of his usual occupations. If the patient is flatly contradicted, he usually becomes much exasperated, and insists with vehemence on the correctness of his notions; but, when he is soothingly dealt with, he will now and then answer certain questions mildly and even distinctly, and by judicious management, may, in general, be restrained without any violent coercive measures. When the disease rises to a high grade, the patient becomes violently and often furiously delirious, talks incessantly, is restrained with difficulty, and is unable to recognize his friends and acquaintances.—(*Eberle*.)

Treatment.—The indications, in the cure of delirium tremens are: 1, to equalize the circulation; 2, to quiet the nervous irritability; and 3, to restore the natural stimuli of the system.

Lobelia inflata is pre-eminently adapted to the fulfilment of the first indication; for it not only equalizes the circulation, but it thoroughly cleanses the stomach,—thus restoring digestion, and regulating all the secretions. Dr. Matson, of Boston, in speaking of the happy effects of lobelia in this disease, states that the patient will in some instances, sink into a calm and refreshing sleep, as soon as he is put under its influence.

To obviate the nervous irritability, the nervine tincture will answer an excellent purpose. The writer has succeeded in giving permanent relief in the most violent cases of delirium

tremens he ever witnessed, simply by the use of the tea of valerian or lady slipper. The symptoms were much modified by the first dose, and after the second, the patient became entirely calm and comfortable.

Cayenne pepper, or what is perhaps better, the compound tincture of myrrh, (*made of brandy*,) should be used in frequent doses, until the system is restored to the usual state of health.

DIARRHŒA.

Symptoms.—Frequent, and copious watery discharges from the bowels, which are sometimes slimy, and frothy, and not unfrequently very offensive to the smell. There is not generally much fever, unless the disease runs into a chronic form, and thus degenerates into chronic inflammation of the bowels; in which case, the pulse, though not very full nor strong, often increases considerably in frequency. In severe cases, the patient soon runs down into distressing debility.

Treatment.—The disease evidently arises from irritability of the mucus coat of the intestines, which is generally caused by indigestion. In this, a disordered condition of the stomach, or the liver, may also be in fault. But the disease often arises from the use of improper food or medicine.* In the treatment, therefore, demulcents, and evacuants of the proper kind, become necessary. Enemas of slippery elm tea, with a teaspoonful of Thomson's No. 6, in each injection, should be used and repeated until the bowels are well cleansed, when the looseness may be checked by drinking freely of bayberry tea,

*The writer, when in attendance at the Commercial Hospital in Cincinnati, in the year 1845, witnessed some striking instances, in which the medicine given, was attended with unequivocally bad effects. A certain Mr. Hutchins, aged about 40, and of good constitution, was admitted into the Hospital about the 1st of Jan., laboring under all the distressing symptoms of diarrhœa in its most aggravated form; for which, on its first appearance, he had procured medical attention. The treatment, as reported by himself, embraced the use of 28 grains of calomel, every three to four hours, besides some pills. This was followed with great debility, and the most rapid emaciation; and on examination a spot of extreme tenderness was found in the right iliac region. This, as supposed by the Lecturer, (Prof. Moorhead,) was occasioned by the mercury, causing inflammation in the cæcum. Of this there could not be a doubt, as every attending symptom strongly corroborated the fact. The patient, in spite of all that could be done for him, continued to run down with the diarrhœa; having sometimes, from 12 to 15 evacuations per day. A number of instances of the kind, among those treated in the Hospital, might here be named, but it is unnecessary, as they are of no rare occurrence.

or by taking the cholera syrup. Sometimes a dose of rheubarb, or what is still better, the neutralizing mixture, will be more prompt, and thorough in its effects than the injections, and may, therefore, be used instead of the latter, or collaterally with them.

The irritation of the bowels may, generally, be relieved by the use of demulcents, such as gum arabic, mallows, slippery elm, and comfrey.

The practitioner should always have in view, the law of vicarious action; for it is most generally the case, that when one set of the excretory organs are preternaturally excited, the others become inactive. Thus it is generally the case in diarrhœa, that the urine, as well as the perspiration, is scanty. These matters must, therefore, not be neglected. Balsam of copaiva has gained some popularity in the cure of this complaint, and is much used by physicians; and, perhaps, by many, without a knowledge of its true therapeutic effect in this disease. This medicine is an active diuretic, and thus as it promotes the urine, detracts from the bowels an amount of fluid corresponding with the increase of the urinary evacuations. Now, although the obstruction of the urine, may not have been the original cause of the diarrhœa, yet it has contributed much to the irritation that has kept it up, and unless the functions of the kidneys were restored, the disease would still have maintained its character. The utility of diaphoretics, in this complaint, depends on this same principle.

Tonic cordials should be used in diarrhœa, to strengthen, and tone up the digestive organs.

DISLOCATIONS.

Dislocations, as well as fractures, and other injuries resulting from violence, have generally been regarded as being out of the province of the common medical practitioner, and to belong exclusively to the business of the surgeon. But as the treatment of injuries of this kind, is so simple, and so much easier performed if attended to immediately on the occurrence of the accident, it is important that not only physicians, but the people generally, should know more or less about it.

A dislocation may generally be known by the position of the parts. If the part be a limb, it will be either longer, shorter, or distorted in some other way, according to the charac-

ter of the injury. There is always more or less pain, swelling, and a partial, or total loss of motion. The end of the dislocated bone may, in many instances, be felt in its new position; and the muscles or soft parts, about the joint, change their shape, and fullness, to some extent.

Dislocations are generally accompanied by laceration of the ligaments of the joints, yet instances do sometimes occur, in which the bones slip out of their places, merely from relaxation of the ligaments. Sometimes, fractures also occur, with dislocations. This is most commonly the case in accidents at the ankle joint, where a dislocation seldom occurs without fracture of the fibula or small bone of the leg. The acetabulum, or socket for the thigh bone, is also sometimes fractured in dislocations at this joint.

A dislocation may be *partial*, that is, resting in part on the natural articulating surface; or *complete*, when the two surfaces are entirely separated. Moreover, the injury may also be *simple*, or *compound*: the first consists simply of the separation of the surfaces; while in compound dislocation, the articulating surfaces are not only separated; but there is also a separation of the muscles, and laceration of the integuments or skin; thus laying open the joint.

Treatment.—In reducing a dislocation, the chief difficulty will be found in the rigidity of the muscles. For the best method of overcoming this difficulty, surgery is indebted to Dr. Thompson, the noted Reformer; for although the use of relaxing means had been in practice for many years, yet until the superior relaxing powers of his lobelia, and the utility of his vapor bath, became known, means of this class, had gained but little popularity. The torturing pulley, and manual force, were chiefly depended on, to overcome the action of the muscles.*

When the reduction of a dislocation is undertaken, the patient should take two or three doses, either of the anti-spasmodic tincture, or of the tincture of lobelia, and should be placed over the vapor bath; or should at least have the muscles, around the injured parts, well vaporized by means of a steam pipe. No alarm need be taken if the medicine should produce nausea, or vomiting, or should sicken considerably;

*Castle, in his manual of surgery, states: "The most effectual mode of firing the muscular power, is by the pulleys, which have this advantage over extension made by assistance, that your force is *gentle* and *continued*. First pass a wetted roller around the limb, and over this buckle on the leather with the rings to which the pulleys are to be fixed. Having fixed them on, draw the cord very gently, until you feel the muscles making some resistance, then rest two or three minutes, and extend again; and so on until you see the muscles beginning to quiver, and by a little further extension they will be overcome.

this is the very purpose for which it is given. Nausea is always attended with a corresponding relaxation of the muscular fibre.

As soon as the muscles are well relaxed, any man of ordinary mechanical genius, professing but a slight knowledge of anatomy, may succeed in reducing the dislocation with the greatest facility, and with, comparatively, little pain.

When the muscles are well relaxed, the patient should be supported on a table, or in any other convenient way; the bones in which the socket is situated, should be secured by an assistant, while the operator takes hold of the limb, or dislocated part, and gently raises the disengaged end of the bone from its new position, and returns it into its natural place.—To effect this, extension, and counter-extension, usually becomes necessary. But it may in many instances be accomplished by changing the position, or rotating the limb; or by means of lever force. In cases of dislocation of the shoulder, for instance, in which the humerus is thrown into the axilla or armpit, the bone may be replaced, simply by placing a compress, or ball of yarn in the arm-pit, under the bone, and then gently pressing the other end of the bone or elbow, toward the body, at the same time shoving it up a little; when the head of the humerus will slide into its socket with the greatest facility. In reducing the dislocation of the femur or thigh bone, the lever principle has been ingeniously applied, by the noted Sweet family, of New England. According to their plan, after the patient is placed on a table, or bed, the leg is taken hold of, by one hand, at the ankle, and by the other, at the knee; the leg is now flexed or bent at the knee, so as to make the lower part very nearly to approach the thigh, in order to convert it into a lever. The leg is now carried a little outward, and the thigh gradually brought up to the body, and thus gently pressed obliquely over the body, with the knee pointing toward the opposite shoulder. The operator now, in the last place, rotates the thigh, by moving the ankle, alternately, inward and outward; when the head of the femur is found readily to slip into its place.

The operator should, not only in making up his opinion as to the nature of the accident, but in the final adjustment of the part, occasionally compare the dislocated limb, or part, with its fellow in the natural state, for by those means, he can have a more certain guide for his conduct, than he can get elsewhere; nor need he be ashamed of this plan, as it is followed by the most popular surgeons, both in Europe, and America.

After the parts are properly adjusted, they should be secured

by proper bandages; and if the muscles do not readily contract or resume their natural state, they may be excited so to do, by the occasional application of cold water.

Rest should always be allowed to the parts, so as to favor the healing or reunion of the lacerated ligaments.

The time in which the reduction of a dislocation may be attempted after the occurrence of the accident, is from two to four months, according to the nature or character of the injury. Successful attempts have, however, been made at the reduction of dislocations of much longer standing.

Compound dislocations.—In those cases of dislocation, in which the soft parts are lacerated or torn asunder, the adjustment of the bones, after cleansing them (should they have been exposed, and thus need it,) by means of a sponge and warm water, should be effected in the same way as in other cases. After which, the margins of the wounds, should be brought together by means of some strips of adhesive plasters, or by stitching, and the sore afterwards dressed, and healed up, as would be done in case of any other wound. The best of attention is necessary, however, to keep the air out of the joint. This must be done by constantly keeping on some impervious plaster.

DROPSY.

(*Hydrops.*)

This disease consists of a collection of serous, or watery fluid in the cellular substance under the skin, or different cavities of the body. The affection receives different names, according to the location of the fluid. When it is diffused through the cellular membrane, either generally or partially, it is called *anasarca*. When it is located in the cavity of the skull, it is called *hydrocephalus*. When in the chest, *hydrothorax*. When in the abdomen, *ascites*, in the uterus, *hydrometra*, and when in the scrotum, *hydrocele*.

Dropsy is caused chiefly by atony, or debility of the absorbent vessels, which is brought on frequently by salivations, drunkenness, by other diseases, such as consumption, affections of the liver, spleen, pancreas, &c. The disease seems, also to arise from family predisposition.

Symptoms.—Anasarcal dropsy is characterized by swelling or tumefaction of the parts, commencing, first, in the feet and ankles, and being generally less in the morning. The tumefaction is soft, and inelastic, and when indented by the finger, the pits remain for some time. The skin is usually more pale than in health, and when the swelling is extreme, it is very smooth and shining. As the disease advances, the swelling proceeds higher up the body, until finally, in bad cases, even the face, and scalp, becomes swelled; the eyelids puff out; the breathing becomes difficult; the urine is small in quantity, high colored, and deposits a redish sediment. The skin is generally dry, owing to the want of perspiration; and there is usually considerable thirst, and some fever. The body becomes much emaciated, evincing a striking contrast between the size of those parts that are swelled, and those that are not. The swelling is sometimes so considerable as to burst asunder the skin, when the water will, often, run out in a stream.

Hydrocephalus.—The symptoms of dropsy of the head or brain, are rather obscure. There, is, however, a pain in the head, particularly across the brow, stupor, dilatation or enlargement of the pupils, nausea, vomiting, slowness of the pulse, and convulsions. This disease chiefly effects children under twelve years of age, and when the child is under three years of age, we have a symptom in the protrusion through the *fontanel* or opening of the head, which in the advanced stage of the disease, becomes very conspicuous.

Hydrothorax.—In dropsy of the chest, the symptoms are, difficulty of breathing, (which is more considerable when the patient is in a horizontal position;) sudden startings from sleep, with anxiety and palpitations of the heart; a sense of weight in the chest; paleness of countenance; cough; swellings in the lower extremities; thirst; scarcity of urine; and want of perspiration. But the most unequivocal symptom of hydrothorax, is the fluctuation of water, which, when it is collected in considerable quantities, may be felt, or even heard, by a bystander, when the body is suddenly agitated or shaken.

Ascites.—Dropsy of the belly is often preceded by loss of appetite, sluggishness, dryness of the skin, oppression at the chest, cough, diminution of the natural evacuations, as those of the skin and kidneys, &c. Signs of the collection of water in the abdomen may now be discovered;—the belly will enlarge and grow tense, or hard to the touch; the breathing will become difficult; and exercise laborious. By striking the

side of the abdomen, the fluctuation of the water may now be sensibly felt by the hand on the opposite side.

Treatment.—Dropsies of the head, chest, and abdomen, are all very difficult to cure; but dropsy of the cellular membrane, which, however, is by far of the most common occurrence, may most generally be cured without much difficulty.

The several varieties of dropsy, are treated on the same general principles, embracing the fulfillment of two important indications. These are: 1, to evacuate the water, or dropsical fluid, by exciting absorption and excretion; and 2, to prevent its re-accumulation, by toning up, and strengthening the system.

It will be perceived at once, that direct means cannot always, nor indeed generally, be used in the removal of the water in dropsical collections. In many instances it is so remotely situated, that it could not possibly be reached, by mechanical means, with safety to the patient. In some instances, we find the water collected within the skull and all the membranes of the brain; at others, it is found within the chest, enclosed by the pericardium or immediate enclosure of the heart.

When the most direct means of relief cannot be instituted, it is only left for us to tax more heavily our medical resources, and apply those that come next in their adaption. We must now excite the absorbent system, and bring the fluid back again into the circulation, and then remove it hence.

In the animal economy, we find certain laws that always obtain.—Thus there is a settled, and fixed disposition of the system, not only to furnish a circulating medium, but to maintain the natural proportions of the principles of the blood. When the system is exanguous or in want of blood, the tissues are absorbed and transformed into blood, and hence the emaciation that so invariably attends starvation. When the serum or watery part is in excess, it is thrown off; when the crassamentum, it is metamorphosed or changed, and dissipated. Whenever there is a lack of serum, all other fluids, that can contribute to its formation, are absorbed with the greatest avidity. Water is sometimes even taken from without, through the skin, for this purpose; and hence it is, that famished mariners, and others, are sometimes relieved from the most pressing thirst, simply by a shower of rain on their bodies.

In the treatment of dropsy, we must take advantage of those principles,—we must use such means as are calculated to evacuate the serum or watery parts of the blood, and thus compel the absorbents to take up the dropsical effusion. It

is upon this principle alone, that we can expect to be successful in curing the hydrocephalus, (*dropsy of the brain or head*,) hydrocardia, (*dropsy of the heart*,) and hydrothorax, (*dropsy of the chest*,) &c.

Among the means best calculated to answer the purpose, as here illustrated, is the vapor bath. In its use, although much of the water running from the person, is condensed vapor, it may safely be calculated, that, as much as a pint of fluid is discharged through the skin during the course of an hour, if the circumstances be favorable. In addition to these effects, the vapor bath also, promotes the other evacuations, and what is more, the genial warmth that it imparts to the body, is eminently calculated to promote the free circulation of the blood, as well as to favor many of the other physiological functions.

The vapor bath, in recent cases of dropsy, should be applied once every day, and in chronic, from one to three times a week. As usual, they should be accompanied by stimulating, and diaphoretic drinks.

Diuretics.—The absorption and evacuation of water from the system, may be much promoted by exciting increased action in the kidneys. For this purpose, the oil, or essence of juniper, queen of the meadow, turpentine, clevers, parsley, asparagus, Indian hemp, melon seeds, elder bark, dandelion, or any other diuretic, should be used. The diuretic decoction is an excellent preparation of this kind, and may be used according to direction. See decoction for dropsy.

The use of the diuretics may be commenced with the bath, in the beginning of the treatment, and should be continued on, as occasion may require, until the cure is complete.

Cathartics.—Among the most active means of exciting absorption, and removing watery collections from the system, are cathartics.

“By irritating the exhalents of the internal surface of the intestines, a greatly increased secretion and loss of serum is suddenly produced by the action of these remedies. As a consequence of this, not only is the further effusion of drop-sical fluid diminished by deriving the blood from the exhalents of the cavities to those of the intestines, but its existing quantity is also directly lessened, by the absorbents assuming a more vigorous action, in order to supply the deficiency which the purging has induced in the serous portion of the blood. This view of the subject will aid us, I think, in accounting for the fact mentioned by Dr. Paris and others, that cathartics often increase the effects of diuretics. If, for in-

stance, we give a diuretic to a dropsical patient, a slight, but insufficient increase of urinary secretion, for the most part, follows; the absorption is, of course, proportionably small. Let a cathartic be now administered. This will excite a sudden and considerable increase of serous evacuation by the bowels; hence an unusual demand for a restitution of this constituent portion of the blood is created; and, by consequence, a new impulse given to the supplying, or absorbing vessels; which continuing *after* the operation of the cathartic has ceased, will have the effect of supplying the kidneys with a larger portion of the elements of their secretion, and, therefore, enable those medicaments which are calculated to increase their action, to operate more effectually."

A powder made of equal parts of jallap, mandrake, and cream of tartar, with a fourth part of cayenne pepper, should be given, in half tea spoonful doses, every hour until it operates freely. During the operation of the cathartic, the patient should be sustained with stimulating cordials. This hydragogue cathartic should be used once or twice a week, as the case may require.*

The elaterium or wild cucumber, is a very powerful hydragogue cathartic, and also operates as a diuretic. The writer has witnessed the most astonishing effects following the use of this article, in the Commercial Hospital of Ohio, at Cincinnati. One case in particular, (a case of *ascites*,) which had long resisted other prominent remedies, at last yielded to this. But on the whole, the remedy is not without fault, it is too drastic, and harsh, in its operation, and cannot be used with entire safety. As we have many other articles that will answer in its place, it is not necessary that we should employ the use of an article, some of the effects of which are so much at vari-

*The writer is well aware of the strong prejudice that exists in the minds of many good and honest Reformers, against the use of cathartics in dropsy; and is very ready to admit, to some extent, the objections that have been urged against their use. It cannot be denied that they produce debility, and irritate the bowels. But what evacuant is there, that does not debilitate more or less? Emetics, diaphoretics, diuretics, &c., all debilitate to some extent for the time, but the debility is not permanent. It arises only as a result of the absence of mechanical agencies, and now, as the organs are relieved, there will soon be a corresponding vital reaction. In this case the end fully justifies the means; when a less active treatment is depended on, the disease often advances, uncontrolled, until it not only produces more debility than the cathartics commonly give rise to, but until it ultimately results in death.

Dropsies of the brain, heart, chest, &c., have always been considered extremely hard to cure, and justly too. Nevertheless, they, like all other diseases, will yield to a proper treatment. Those therefore, that are not able, successfully to treat these affections, (endeavoring to do it without the use of cathartics,) should be careful not to proscribe, inconsiderately, agents so efficient and safe, as are these in dropsy.

ance with our sound principles, unless by further pharmaceutical improvements, its bad effects may be obviated.

Frictions and Rubefacients.—The rubefacient oil, and other rubefacients, and stimulating external applications, are sometimes of great service, especially in anasarca or dropsy of the cellular membrane. The use of the flesh brush, or even a coarse towel, is also an important means, and should never be neglected in difficult cases. These remedies are eminently calculated to excite the absorbent system.

Emetics.—These are useful in the treatment of dropsy, not because they produce much of a direct evacuation of the water; but they cleanse the stomach, and thus prepare it, not only for the reception of the other medicines, but for the proper digestion of the food, which is an important matter; for the entire system is not only dependent on this function when in health, but without it can never be restored from disease.—Moreover, the nausea produced by emetics, is also calculated to sustain perspiration by means of the attendant relaxation. Finally, the shock given to the system by their operation, is eminently calculated to excite the absorbents, and also, to some extent, the excretions.

It is a good plan to commence the treatment of dropsy with the exhibition of an emetic, and they always do better if administered immediately after the patient comes out of the bath. Lobelia should generally be preferred to other emetics, for this use. It is not generally necessary to use this class of agents, more than once or twice a week.

Tapping, Bandages, &c.—In hydrocele or dropsy of the scrotum, when the absorption of the fluid cannot be effected, paracentesis or tapping is sometimes advisable. In performing this operation, a trocar and means for injection, are all the instruments that are necessary. The trocar (being within the canula or tube,) should be introduced in the fore part of the scrotum, passing obliquely, or nearly perpendicularly upward, in order thus to avoid injuring the testicles. The trocar should be withdrawn as soon as it has entered the tunica vaginalis or inner membrane. The canula should be left to remain, and endeavors should be made to evacuate all the fluid; and with a view to effect this, the parts should be gripped with the hand and pressed moderately. Before the canula is removed, a weak solution of carbonate of potash should be injected through it, by means of an elastic bottle, having a proper tube to it, in order thus to excite inflammation, which

is all important to prevent the re-accumulation of the water.

This operation had best only be entrusted to experienced or skillful hands, as it is very easy to do mischief here.

Tapping in ascites or dropsy of the belly, is often practised by some physicians, but the writer has never found much practical advantage in this treatment of the complaint. The water is almost certain to accumulate again. In this variety of dropsy, we cannot have the advantage of the inflammatory action that we may excite after tapping in hydrocele, and hence the operation is of less benefit. The operation, however, is a very simple and safe one, and hence may be performed in bad cases, when it becomes an object to relieve the patient of his intolerable burden.

When the operation of tapping is performed, the patient should be placed in a high chair, with a vessel between his knees, the operator sitting on a lower chair, immediately before the patient. A sheet should now be crossed around the abdomen, the ends of which should be held by an assistant, so as to press it tightly on the abdomen. The operator should now introduce the trocar, after making an incision, about three fourths of an inch in length, with a lancet, in the *linea alba*, or white line passing from the umbilicus to the pubis.—The point at which the trocar should be entered, is about one inch below the umbilicus. The instrument is entered deep enough, when the water escapes on the removal of the blade from the canula.

The operation for ovarian dropsy is generally performed in the same manner, and place, as for ascites.

Bandages are sometimes applied to the feet and legs in anasarca, and around the abdomen in ascites, to prevent their further enlargement, but the practice, it is believed, is not generally very successful. But as the experiment is a safe one, those who may choose so to do, may try it.

EARACHE.

(*Otalgia.*)

This, which is occasionally, a very distressing complaint, arises generally from inflammatory affections of the internal part of the ear, which may be brought on by exposure to cold; by the introduction of some foreign substance; and by acci-

dental injuries: or it may arise, as a sequel of other diseases, such as measles, scarlet fever, &c.

Treatment.—The pain may generally be relieved by a dozen or fifteen drops of anti-spasmodic tincture, or tincture of lobelia, dropped into the ear. Tincture of camphor will sometimes do best for this purpose. But if the case be severe, nauseating doses of lobelia should be taken once in 10 or 15 minutes, bathing the feet well at the same time, to equalize the circulation. The ear should also be steamed by placing the steaming pipe within a proper distance of the ear, and thus letting the vapor pour against the part, which should be shielded from the air by means of a cloth, placed over the head. Among the best articles to medicate the vapor for this use, is tincture or gum camphor.

The oil that may be pressed out of peach meats, if dropped into the ear, will generally give relief in a short time.

EPILEPSY.

(*Epilepsia.*)

This disease, whether considered with reference to its immediate symptoms, or its remote consequences, is unquestionably, one of the most distressing, and deplorable of human maladies. Its morbid influence on the mind is no less marked, than that on the body, and hence it was called by the ancient Greeks, *morbus sacer*, or the sacred disease, from the idea of its infliction by the gods. It is supposed that about two-thirds of those affected with epilepsy, suffer from its injurious effects on the mind, and that of these, about one third are deprived of their reasoning faculties.

The effects of the disease on the body, are also very distressing and sometimes frightful. "The epileptic attack sometimes comes on suddenly without any manifestations of its approach. More frequently, however, certain symptoms precede the occurrence of the paroxysm, and of these the following are most common:—A peculiar confusion and distressing feeling in the head; an absent, wandering, and confused state of the mind; giddiness; dimness of sight; ringing and loud sounds in the ear; sparks and flashes of light before the eyes; distension of the veins of the head and neck; a trembling and feel-

ing of restlessness in the extremities; an anxious feeling in the præcordial region; restlessness and starting during sleep; loss of the power of distinct articulation; complete temporary deafness and drowsiness. In some instances there is a manifest change in the moral disposition a short time before the accession of the attack. Sullen gloominess with an irritable temper is manifested by some patients. In some cases the mind falls into a kind of reverie from which it cannot be drawn, which terminates often speedily in total insensibility. Some epileptics evince an unusual timid disposition; others are spiteful, resentful, and mischievous, shortly before the accession of the paroxysm. Occasionally, spasmodic twitches of particular muscles, especially in those of the face, precede the attack. Richter states, that painful sensations in certain parts of the body, particularly spasmodic pains in the stomach, with a rumbling noise in the bowels, occur as the precursor of the epileptic paroxysm."

When the paroxysm comes on, the patient falls suddenly with convulsions accompanied by temporary loss of consciousness, sense, and voluntary motion. The face is frightfully distorted, the breathing hurried and laborious, the tongue protruded, and a frothing at the mouth. The eyes roll about wildly in their sockets, though sometimes at length become permanently fixed. The countenance is usually of a dark purple color, but is sometimes pale. The paroxysm may consist of a single fit, but more usually, there is a succession of fits with alternate relaxations, sometimes to the number of a dozen, or even twenty or more. After the final fit, the patient generally soon becomes conscious, and, sometimes, has not the least recollection of his sufferings, or of any thing that passed during the paroxysm. Some patients, however, often lay in a stupid or comatose state for hours, after the convulsions have subsided.

The disease is caused by blows, fractures, and other injuries of the head by external violence; hyperæma, or fullness of the vessels of the brain, arising from obstruction in the circulation; water in the brain; tumors, concretions, and polypus among the membranes of the brain; mal-formation of the head; and sudden frights, violent passions, drunkenness, intense pain, worms, teething, poisons, obstruction of accustomed evacuations, and hereditary predisposition, may also give rise to epilepsy.

Treatment.—The convulsions will yield, with singular promptness, to the effects of the antispasmodic tincture. This should be given in tea spoonful doses every five or ten

minutes until relief be obtained. In the meantime, friction with the use of some stimulating preparation, such as the rubefacient solution, or the bathing drops, should be applied to the extremities.

Various preparations have been used to prevent the recurrence of the disease, among the best of which, are pills composed of equal parts of lobelia seed, nervine tonic, and cayenne pepper. Of these the patient should take as many, once a day, as the stomach will bear without sickening too much. The pulverized seeds of the thorn-apple, in one grain doses twice a day, has gained great popularity as a remedy in epilepsy, but the medicine is not a safe one, being possessed of poisonous properties of a very active character.

The following makes a very good compound, for common use, by epileptics:

Take of	Pæony,.....	1 ounce.
"	Sculp, ...	1 do.
"	Valerian, ...	1 do.
"	Asafœtida, ...	½ do.
"	Lobelia, ...	¼ do.

Pulverize, and put them into a quart of good wine. The patient may take a table-spoonful, from one to three times a day.

The practitioner should always inquire into the cause of the complaint, and if this can be discovered, it should be obviated if possible, for no treatment will be successful, while the exciting cause of the disease is continued. Care as to diet, is also necessary.

FAINTING.

(*Syncope.*)

This affection is characterized by a partial, or total cessation of the functions of the lungs and heart; thus the pulse is either very weak or entirely imperceptible; the respiration indistinct; the countenance pale; and the extremities cold. Fainting is generally brought on by loss of blood, or irregularities of its circulation, by which the brain is deprived of its usual and necessary stimulus; and hence sudden and violent

emotions of the mind, fright, intense pain, &c., by suspending the functions of the heart, may also give rise to it.

Treatment.—In many instances the patient is relieved, immediately, by being placed in a recumbent position. Sometimes a sudden dash of cold water, into the face, will give relief. Stimulating the nostrils with volatile excitants, such as some of the preparations of ammonia, &c., are pretty certain to prove beneficial.

In urgent cases of fainting, permanent stimulants are required, such as cayenne pepper, ginger, and carbonate of ammonia. Friction with stimulating liniments are also sometimes of great service.

FALLING OF THE FUNDAMENT.

(*Prolapsus Ani.*)

This difficulty consists of a descent of the lower portion of the large intestine, so as to expose the bowel externally.—When thus exposed, the parts become irritable and painful, and often, swell considerably. The difficulty arises from a relaxed condition of the parts, brought on, most generally, by the use of purges that spend their stimulating and relaxing influence excessively on this portion of the intestine. Aloes, in particular, is very apt to bring on this difficulty. The most of the pills, that are sold throughout the country, are also calculated to do mischief in this way. The people cannot be too careful about the use of public nostrums. The constitutions of thousands, have been ruined forever by their use, while many others, for their imprudence have paid the forfeiture with their lives.

Treatment.—The parts sometimes return without assistance; but when this becomes necessary, the fingers should be oiled, and then with them the bowel should be gently returned, which is easily effected. Injections, made of such astringent articles as will not irritate the bowels, should now be used to contract and stay the part. For this purpose, white pond lily, witch hazel, or raspberry, is very good. An infusion of these articles may also be applied externally by means of a sponge.

Falling of the womb (*Prolapsus Uteri*,) is also treated with the use of astringent injections to the parts, by means of a syringe for the purpose, which may be obtained at any drug-store.

FELON.

(*Paronychia*.)

Abscesses of the soft parts of the fingers, are variously called, according to their situation in the part affected, as to their depth from the surface. When they are situated in the dermis or true skin near the nail, they are commonly called *run-round*, (*tournoie*;) when in the cellular tissue, *whitlow*, and when in, or under the periosteum or membrane covering the bones, it is called *felon*. The abscess when thus situated in the finger, is in its essential character, just the same as when affecting the same tissues in other parts of the body: the attending pain, and slowness of its course, being caused by the firmness of the integuments or skin, which does not yield much to the swelling, nor yet so readily to the suppurating process.

Treatment.—As no ease can reasonably be expected until the nerves are relieved from the pressure caused by the swelling, the best plan, if the inflammation cannot be terminated by resolution, is either to lay the finger open at once, to the depth of the diseased part, with a lancet, or to destroy the skin as much as is necessary to give vent to the swelling as well as the pus, when collected.

A very good plan to effect the latter object, is to pare down the skin over the most painful part, and bind on a piece of caustic potash, as large as a grain of Indian corn, and afterwards keeping the cloth around the finger wet, with a view thus to promote the effects of the potash. Should the first application not make a sufficient opening, it must be repeated. This treatment will, generally, soon relieve the pain, and very much favor the escape of the pus. When the part is open it should be poulticed, and treated in other respects, like any other abscess.

The skin may also be relaxed and rendered less firm, by holding the finger in lye, as hot as can be borne, for 15 or 20

minutes, or some soft soap may be kept on, for three or four hours, by means of a rag, which will answer the same purpose. After these applications, the parts should be kept in a moist and relaxed condition by the use of proper poultices, and after the pus is discharged, the sore should be healed up.

FEVER.

(*Febbris.*)

The importance of a correct knowledge of the true pathology of fever, is equalled only by the number of theories that have been produced on the subject. "The history of practical medicine consists of little else than a review of the doctrines which have successively risen and sunk again, concerning the nature and treatment of fever. Whatever other objects of interest or importance within the domain of medical science may have attracted the attention of physicians, fever has at all times been viewed as presenting the most extensive and inviting field for observation, and the exercise of ingenuity. It is in this department that observation and research have been the most industrious in accumulating materials, and hypothesis has luxuriated in her wildest exuberance."

The term *fever* or *febris* comes from *fervor*, 'heat,' which is, indeed, one of the most prominent characteristics of the disease to which it has given its name. It is, however, strange enough, that simply a name should control the investigations and conclusions of medical philosophers, to the extent that this has. We find that the *authors*, the *professors*, and the *practitioners* of the Allopathic or fashionable schools of medicine, whatever their theories may have been, have universally treated this affection as one whose essential peculiarities and necessary and only characteristics were involved in either an abnormal increase of heat, or of force in the body. Take up a medical book where you will, and you will find their course of treatment to be copious *blood-letting*,—the free use of *mercury* and other similar *depletives*, and *nitre* with other active *refrigerents*.

Nothing, however, is more certain, (although some on the other extreme have denied it,) than that the temperature, in some cases of fever, is sensibly augmented, and that it is not unfrequently found from five to ten, or even fifteen degrees

above the natural standard. The skin is, in certain varieties of fever, sometimes found so hot, that it is uncomfortable even for an individual in health to remain long in contact with the fever patient. But all this must only be viewed in the light of an effect, while the cause must be sought elsewhere. Nor would even this elevated temperature prove mischievous, were the other circumstances compatible.

That degree of heat called the *animal temperature*, is indispensable to life, and, perhaps, some old school pathologists may be a little astonished, when it is conclusively proven that the source of *animal heat* and of *fever heat*, is precisely *identical*.

Combustion is this source.—It alone will explain the phenomena that attend the exhibition of the animal temperature, as well as the heat in fever. That this process may be sustained in the system, is abundantly obvious. Oxygen, the supporter of combustion, is furnished by means of the respiratory function, and is thus brought in contact with the combustible materials in the blood, with which it unites during the course of the circulation. Thus the chemical union of oxygen with the combustibles,—carbon, hydrogen, sulphur, phosphorus, &c., evolves heat which before existed in a latent state. Now it is known that for oxygen to unite chemically with carbon, under any circumstances, without generating heat is impossible, and is equally true, by the escape of carbonic acid, that this union takes place, and it is certain, that the oxygen, taken into the system, makes its escape in no form except in combination with some of the elements above named.

Perhaps a position so new, and conspicuous, might be considered rather adventurous for the writer, without the advantage of the strong bulwarks of acknowledged authority. It is therefore rather encouraging to have the aid of a champion like the German chemist, LIEBIG,* who in his *Animal Chemistry*, page 17, remarks: "All living creatures, whose existence depends on the absorption of oxygen, possess within themselves a source of heat independent of surrounding objects.

"This truth applies to all animals, and extends, besides, to the germination of seeds, to the flowering of plants, and to the maturation of fruits.

"It is only in those parts of the body to which arterial blood, and with it the oxygen absorbed in respiration, is conveyed, that heat is produced. Hair, wool, or feathers do not possess an elevated temperature.

*M. D.; PH. D., F. R. S., M. R. I. A.; Professor of Chemistry in the University of Giessen, etc., etc.

"This high temperature of the animal body, or as it may be called, disengagement of heat, *is uniformly and under all circumstances the result of the combination of combustible substances with oxygen.*

"In whatever way carbon may combine with oxygen, the act of combination cannot take place without the disengagement of heat. It is a matter of indifference whether the combination takes place rapidly or slowly, at a high or at a low temperature; the amount of heat liberated is a constant quantity.

"The carbon of the food, which is converted into carbonic acid within the body, must give out exactly as much heat as if it had been directly burnt in the air or in oxygen gas: the only difference is, that the amount of heat produced is diffused over unequal times.

"In oxygen, the combustion is more rapid, and the heat more intense; in the air it is slower, the temperature is not so high, but it continues longer."

In the healthy or normal condition of the body, the character and extent of the combustion is controlled by the vital force, and the temperature of the human body is of a regular standard,—99 degrees Fahrenheit. The means by which the animal economy maintains this standard, are, 1, The amount and character, of the combustible matter that is furnished. 2, The amount of oxygen that is admitted to the circulation; and 3, The evaporation sustained by the cutaneous transpiration. All this is superintended and singularly controlled by the *vis vitæ*.

"Since no part of the oxygen taken into the system is again given off in any other form but that of a compound of carbon or hydrogen; since, further, the carbon and hydrogen given off are, in a normal condition of health, replaced by carbon and hydrogen supplied in the food, it is clear, that the amount of nourishment required for its support by the animal body, must be in direct ratio to the quantity of oxygen taken into the system.

"Two animals, which in equal times take up by means of the lungs and skin unequal quantities of oxygen, consume quantities of the same nourishment, which are unequal in the same ratio.

"The consumption of oxygen in equal times may be expressed by the number of respirations; it is clear that, in the same individual, the quantity of nourishment required must vary with the force and number of the respirations.

"A child, in whom the organs of respiration are naturally in a state of great activity, requires food oftener, and in great-

er proportion to its bulk, than an adult, and bears hunger less easily. A bird, deprived of food, dies on the third day, while a serpent, which, if kept under a bell-jar, hardly consumes in an hour so much oxygen as that we can detect the carbonic acid produced, can live without food three months and longer.

"The number of respirations is smaller in a state of rest than during exercise or work. The quantity of food necessary in both conditions must vary in the same ratio.

"An excess of food is incompatible with deficiency in respired oxygen, that is, with deficient exercise; just as violent exercise, which implies an increased supply of food, is incompatible with weak digestive organs. In either case the health suffers.

"But the quantity of oxygen which an animal takes up by the lungs, depends not only on the number of respirations; it is also affected by the temperature and density of the atmosphere.

"The capacity of the chest in an animal is a constant quantity. At every respiration a quantity of air enters, the volume of which may be considered as uniform; but its weight, and that of the oxygen it contains, is not constant. Air is expanded by heat, and contracted by cold, and equal volumes of hot and cold air contain unequal weights of oxygen. In summer, air contains aqueous vapor, in winter it is dry; the space occupied by vapor in warm air is filled by air itself in winter; it contains, for the same volume, more oxygen in winter than in summer. In summer and in winter, at the pole and at the equator, we respire an equal volume of air; the cold air warmed during respiration in the air passages and pulmonary cells, acquires the temperature of the body. To introduce into the lungs a given volume of oxygen, less expenditure of force is necessary in winter; and for the same force, more oxygen is inspired.

"In an equal number of respirations we consume more oxygen at the level of the sea than on a mountain. The quantity of oxygen inspired and of carbonic acid expired, must therefore vary with the height of the barometer.

"The oxygen taken into the system is given out again in the same forms, whether in summer or winter; hence we expire more carbon in cold weather, and when the barometer is high, than we do in warm weather; and must consume more or less carbon in our food in the same proportion; in Sweden more than in Sicily; and in our more temperate climate a full eighth more in winter than in summer.

"Even when we consume equal weights of food in cold and warm countries, infinite wisdom has so arranged, that the ar-

ticles of food in different climates are most unequal in the proportion of carbon they contain. The fruits on which the natives of the south prefer to feed do not in the fresh state contain more than 12 per cent of carbon, while the bacon and train oil used by the inhabitants of the arctic regions contain from 66 to 80 per cent. of carbon.

"It is no difficult matter, in warm climates, to study moderation in eating, and men can bear hunger for a long time under the equator; but cold and hunger united very soon exhaust the body."—*Liebig*.

As already remarked, these phenomena are all under the supervision of the *vis vitæ*, whose office it is, not only to superintend the formation, growth, and full developement, of every part of the animal organism; but to maintain and defend it until the objects of its earthly career are accomplished.

But the physiological laws, though supreme, are not always maintained, and the control of the vital principle is not absolute; thus while the body, without its influence, becomes the immediate subject of arbitrary chemical laws; the vital principle on the other hand, is much dependant on the state of the body for the maintenance of its force, and under certain circumstances, even, for its union with the body. On this head Prof. Liebig very justly remarks: "The living animal body exhibits its peculiar manifestations of vitality only at certain temperatures, when exposed to a certain degree of cold, these vital phenomena entirely cease.

"The abstraction of heat must, therefore, be viewed as quite equivalent to a diminution of vital energy; the resistance opposed by the vital force to external causes of disturbance must diminish, in certain temperatures, in the same ratio in which the tendency of the elements of the body to combine with the oxygen of the air increases."*

Thus vital resistance, like any other power, may be overcome by a superior force. The numerous mechanical and chemical agencies may, therefore, become so many sources of threatening mischief. But *cold*, as a morbid agent, certainly stands unrivalled among all the physical causes of disturbance. It possesses the most singular potency of overcoming, and diminishing vital force.

A variety of mischievous consequences may be expected to supervene as results of this diminished condition of the vital force, and thus we have the great catalogue of diseases, that are arranged, by nosologists, into different *classes*, *orders*, and *genera*, according to the tissues that they may implicate, their respective grades of violence, &c.

*Liebig,—*Animal Chemistry*,—p. 222.

Among the earliest indications of diminished vitality, are, uneasiness, dullness, yawning, stretching, lassitude or languor, debility, loss of appetite, disturbed sleep, wandering pains and sickness at the stomach. Thus in the same ratio that vitality declines, it is found that organic lesion supervenes.

We find that the tissues of the body, by virtue of their relation with the vital principle, are possessed of sensibility and irritability, and that under the laws of these principles, the circulation, and every other function of the system is maintained. It is by means of irritation that the singular phenomenon of vital reaction is excited.

Now after an attention to these preliminaries, the reader, it is presumed, will be able to understand the writer's arguments, in bringing to bear those propositions already offered, in the illustration of the essential phenomena of fever. It was proposed:

1. That combustion is the source of animal heat.
2. That in the normal or healthy condition, the chemical laws, and all the animal functions, are under the control of the vital force.
3. That the vital force, under certain circumstances, may become diminished, and thus combustion, and various other chemical phenomena, may increase, or be brought to play with a facility corresponding with the diminution of vitality, and that by consequence, an infinite variety of morbid conditions may supervene.
4. That although vitality may be diminished, and disease may have set in, yet a *re-action* will always be manifested, corresponding with the remaining vital force.

The argument then is, first, that it is clearly evinced in the first proposition, that in the healthy condition of the system, just enough combustion is carried on by the union of the oxygen, (taken into the circulation through the lungs, and the skin) with the elements of the blood, and the metamorphosis or worn out tissues of the body, to answer the ends of the vital economy; while the elements are defended from any further influence or interference of the oxygen, by the vital force, as shown in the second proposition. In the second place, when vital protection is wanting, the oxygen will unite more freely with the combustibles of the body, and thus produce the increased temperature of fever, while all the other symptoms of this affection, are brought on, partly, as a result of this increased combustion, and partly by the functional derangement brought on directly by the want of vital superintendence, as illustrated in the third proposition. Finally, the combustion, and the functional derangements, are still more

or less limited by the remaining vitality, (as stated in the fourth proposition,) and hence the numerous *indications of nature*, and the origin of the phrase *vis medicatrix naturæ*.

It may now be seen, that fever or an abnormal increase of heat, strictly speaking, is not a disease, but rather, in this instance, a symptom attending disease, its essential character being identical with animal heat. The primary cause of that variety of diseased action called fever, as well as all other morbid influences, according to the doctrines here proposed, is a *diminished condition of the vital force*. The remote causes, are, *cold, exhaustion or fatigue, malaria, contagion, &c.* The exciting cause is *oxygen*.

Fever then does not differ, in any essential particular, from disease known by any other name, excepting in its exciting, and perhaps some of its remote causes.

The circumstances that are necessary to the rise of fever, are, 1, *debility*, and, 2, *irritation* in the vascular system. Without the irritation, the *debility alone*, would not produce much of an increase of heat, for although the process would not meet with much vital resistance, yet as the momentum of the circulation is not increased, and therefore the blood not receiving more than a usual quantity of oxygen from the lungs, it is plain, that no increase of combustion can be supported.—On the other hand, should the *irritation* exist alone, and should the motion of the blood be even considerably accelerated, and thus receive an increased quantity of oxygen, the temperature will not be much increased; as the free union of the oxygen, with the combustibles of the body, is controlled by the vital power.

We have an example of irritation without debility in the use of vegetable stimulants, such as pepper and ginger; they increase the pulse but do not produce fever or inflammation, because they do not produce debility.

When some of the remote causes of fever are compared with their legitimate effects, the philosophy of this doctrine is strikingly evinced. Cold or low temperature, that most prolific source of disease, in its effects on the system not only diminishes vitality, but contracts the skin—closes its pores, and thus confines the worn-out, and peccant matter, which nature had designed to pass off in this way, and which in quantity is equal to three-fifths, or perhaps two-thirds, of the amount of all we eat and drink. This crude material is consequently carried through the system, in the circulation, irritating the delicate coats of the vessels, and giving rise to great vascular excitement. The blood, by this rapid circulation, receives an excessive amount of oxygen, in the lungs, which, meeting

with comparatively little vital resistance, in its union with the carbon and hydrogen of the blood, as well as the debilitated tissues, gives rise to the increased temperature evinced in febrile diseases. The irritating, and poisonous matter communicated by contagions, malaria, &c., operate on the same principles, that is, they diminish vitality and produce vascular excitement.

INTERMITTENT FEVER.

(*Febris Intermittens.*)

Intermittent fever, as the name denotes, comes on by paroxysms. These occur, generally, at various regular intervals, and consist of three consecutive stages, called the *cold*, *hot*, and *sweating* stages. When a paroxysm is over, the patient feels tolerably comfortable, and is generally able to do more or less work, until the occurrence of the next, which is generally in one, two, or three days. When the paroxysm occurs every day, the ague is called *quotidian*; if every second day, *tertian*; and if on every third day, *quartan*. The intervals between paroxysms, are called the *apyrexia* or *intermissions*.

Symptoms.—The incipient or forming stage of an intermittent paroxysm, is attended with symptoms which do not differ much from those of other forms of fever. There is generally a sense of lassitude, frequent yawning, and stretching, and an uncomfortable sense of weariness of the entire body, attended with slight pains and aching in the loins and extremities.

Cold Stage.—Sooner or later, after the appearance of the foregoing symptoms, the patient begins to experience slight and transient sensations of cold, along the back; the nails and lips turn blue, and the skin pale. The chilly sensation now pervades the whole body; the patient becomes restless and irritable in his feelings; his ideas pass his mind unusually rapid, and being impatient, he crumps himself down in a chair, or goes to bed, shivering and shaking with the cold.—The shaking, or rigors, in some instances, become so severe as to resemble convulsions, and not unfrequently alarm those unacquainted with this distressing complaint. During the

chills, the sensibility of the surface becomes benumbed; the skin unusually pale, shrunk, and rough, presenting to the touch those small prominences, that have given rise to the name *goose-skin*, which are caused by the prominence of the bulbs of the hair, owing to the departure or recession of the fluids from the skin, or cutaneous surface surrounding them. During the chills, as well as the following stage, the breathing is remarkably quick, and somewhat laborious, vomiting also occurs in many instances; the matter ejected, is generally bilious, and foul. The duration of this stage is variable, but generally lasts from 15 minutes to one or two hours. The chills are not always as severe as above noticed, and it sometimes happens in some persons, that only a slight sense of coldness is felt. Small children seldom shake; they, however, exhibit strong signs of chilliness.

Hot Stage.—The cold stage is rapidly succeeded by the hot or feverish state, which is premonished by sickness at the stomach, thirst, and dryness of the tongue. As the sensation of cold subsides, the color of the skin changes, and becomes red; the countenance is flushed; tongue dry, and thirst intense. The pulse, which in the cold stage is contracted, and weak, now becomes full, hard, and frequent. The fever runs high, and is attended with intense headache, generally in the forehead. The temperature of the blood, generally, rises from three to six degrees Fahr. The hot stage generally lasts considerably longer than the cold.

Sweating Stage.—This stage, which is the effect of vital reaction, constitutes the last in the paroxysm. The perspiration appears first on the face and breast, but soon covers the entire body, and is, in some instances, so considerable as to wet the clothes about the patient. The headache is now gone, and likewise the thirst; the pulse becomes softer and less frequent; the breathing easy and free; and the heat subsides rapidly.—The urine now is free and deposits a pale red sediment, but in the preceding stage is scanty, and has no sediment. The perspiration continues until the patient is entirely free and comfortable, enjoying the condition of *apyrexia*, or convalescence.

Cause.—*Koino miasmata* or poisonous effluvia arising from marshes and stagnant waters, is the only general cause of intermittent fever; nevertheless, instances of this disease have been known to occur from other causes, such as sudden suppression of accustomed evacuations, &c. The time necessa-

ry for the developement of the disease, after the exposure, is generally from one day to two weeks. Dr. Macculloch has stated that it never takes more than 24 hours from the exposure; but he was most certainly mistaken in the matter.

Agues most generally occur in autumn, and are much more prevalent in warm and dry weather. The distance that this poison is carried by the atmosphere from the place whence it emanates, in quantities sufficient to bring on the disease varies very much, as it is much governed by the direction of the wind, the lowness of the ground, &c. But it is evidently, in some instances, carried a number of miles.

Intermittents are seldom fatal in their termination; but if badly managed, or suffered to run on too long, they often bring on other diseases, such as dropsies, enlargements of the spleen, and liver, dyspepsia, and various other diseases, which are often difficult to cure. If the two first stages, or either of them become milder, or shorter in their duration; if the paroxysms come on at a later hour, or should miss occasionally altogether; and if the strength and appetite keeps up good, or when a scabby eruption about the mouth and nose, breaks out, and the natural discharges, suppressed by the ague, re-appear, the signs are *favorable*. But if the duration of the cold and hot stages increases; and if the fever and headache should be very severe, specially if attended with delirium, or coma; if the abdomen should grow tense; the tonsels swell up, or the urine become bloody; or should the intermittent change into a severe remittent, or typhus; the signs are *unfavorable*. But the latter seldom occurs, except in warm countries, and as a result of bad treatment.

Treatment.—All common cases of ague may be safely, and effectually treated, in the following way:—First, administer a lobelia emetic, immediately after the fever subsides, when the patient is in the sweating stage; this to be followed the same day, with a dose of the anti-bilious pills. When these are done operating, give the following:

Take of Quinine	$\frac{1}{2}$ drachm.
“ Powdered dogwood bark, ...	1 do.
“ Cayenne pepper, ...	$\frac{1}{2}$ do.

Mix well, and divide into nine powders. Give one every meal time, two hours before eating, until all be taken. The ague will stop before all the powders are taken, but they must nevertheless all be taken; and then be followed up with another dose of pills. Bitters made by digesting equal parts of columbo root, and dog-wood bark, in wine, in the propor-

tion of three ounces of the medicine to the quart of wine, should now be used in half wine glassful doses, three times a day, for two or three weeks.

In cases of long standing, the first dose of pills should be preceded by a course of vapor and lobelia.

Patients recovering from the ague, should not go to work too soon; for they are generally much weaker than they are aware of; and by imprudent exposure, a relapse may be brought on.

REMITTENT FEVER.

(*Febris Remittens.*)

The difference between remittent or bilious fever, and intermittent fever, consists chiefly, in their degrees of violence, and the continuation of the paroxysms, which latter are in inverse ratio, to those of the common ague. In the intermittent, the paroxysm generally occupies only from two to four hours in twenty four, or forty eight, but in the remittent, it lasts, usually, about twenty, to twenty-two hours, leaving only an intermission, per day, of the length of time that the paroxysm of the intermittent lasts.* Thus as one paroxysm succeeds another, so rapidly, it is called remittent.

Remittent fever is, generally, much more violent than the intermittent, but the grades of its violence vary very much, and hence it has, by some writers, been divided into *simple remittent*, and *malignant remittent*; but this distinction is not necessary, as it is precisely the same character of fever, only that it is modified by the idiosyncrasy of the patient, or the character of the weather—climate and season. The malignant type is much more common in warm climates, and seasons, than in those less so.

Symptoms.—Before the attack of a remittent fairly sets in, the patient experiences the various unpleasant feelings that are attendants of all these classes of fever. There is much languor, drowsiness, and a sense of anxiety, caused by a dull aching in the back, and limbs. Generally, there is a remark-

*The duration of the paroxysm, however, often varies considerably; so much so, indeed, that two paroxysms are sometimes experienced in twenty four hours.

ably increased sensitiveness to cold, and shortly before the febrile paroxysms set in, there is a distressing tenderness of the skin, so that the slightest touch causes pain; even combing of the hair in a contrary direction, causes a feeling of soreness, as if the skin were blistered. At times, transient chills, alternated with slight flashes of heat, are experienced at this stage. These symptoms continue, longer or shorter, until finally the fever is fully established. The sufferings of the patient are now much enhanced by intense pains in the head, eyes, back, and limbs, particularly in the bones of the legs. There is also an intolerable soreness of the flesh, lasting for many days. The secretions and excretions, (except the bile;) are checked, and hence the skin is dry, and the mouth and eyes lack moisture; the urine is scanty, and the bowels costive. The bile is an impure alkaline product of combustion, corresponding to the ashes of common combustion in open fires, and is, in this fever, very abundant, being diffused throughout the entire system, staining the eyes and skin yellow. The tongue is covered with a thick brownish yellow fur, and the thirst intolerable. There is, sometimes, considerable disturbance of the stomach, attended with nausea, and vomiting of bilious matter. A sense of fulness, is also sometimes felt in the region of the stomach and liver. These symptoms, accompanied with a high fever, run on for a longer or shorter period, when they moderate down somewhat, or give way entirely for a short time to a slight perspiration. This remission generally occurs in the morning, and lasts only an hour or two, when another paroxysm, perhaps much more severe, sets in, which again yields, like the former, and thus the paroxysms continue to succeed, one after another, until the disease ends in death, or is either overcome by the vital force, or is removed by medicines; or else yields to an intermittent, or typhus, according to the extent of vital resistance.

It is to be remarked, that the above description only applies to the milder forms of remittents, and that the malignant character is much worse than this, in every way. Remittents sometimes seem to prevail as epidemics.

Cause.—Remittent fever has its general cause in miasma, but is known to arise from various other causes. It seems that this requires a more concentrated form of malaria, than intermittents do; or in other words, if the atmosphere contains the poison in large quantities, remittents, will be most likely to occur, and *vice versa*. By investigation, it will generally be found, that the epidemic appearance of this disease, is favored by atmospheric conjunctions; and in this way, it

it may be accounted for, how it is, that this disease seems to break out as an epidemic, even in sections where the ague has never been known. Suppose that in the season of the year, and under the circumstances which favor the production of miasma, a strong current of air should continue for a few days, over a section whence this poison emanates, and pass afterwards into a neighborhood, even where the disease was never before known, would it not now be likely to prevail?

Low sections of country are most subject to this disease, and warm weather, as already remarked, also favors it most.

Remittent fever may be known from intermittent, by the length of the paroxysms; from continued fever, by the remission; typhus by the strength of the patient and fulness of the pulse; from the synochal or inflammatory grade, by the presence of the gastric and bilious derangement; and from yellow fever, by the comparative mildness of the former, and the intense gastric irritation of the latter, together with the appearance of the *black vomit*, and more deep yellowness of the skin. Among the favorable symptoms of remittent fever, may be considered, the protraction of the remission; free perspiration; the free discharge of urine, depositing a red or brownish sediment; and every symptom of its change into an intermittent, the most prominent of which, are, a comparative mildness of the symptoms every second day.

But should the strength of the patient fail rapidly, and the remissions grow shorter and less marked; and should the pulse sink, and the patient incline to stupor, or delirium, danger may justly be apprehended.

Treatment.—The treatment of remittent fever, must be commenced by the use of a thorough emetic, and the vapor bath, which must be followed by a brisk dose of the cathartic powder or anti-bilious pills, aided by relaxant enemas.

During the operation of the emetic, the patient should drink freely of a strong infusion of thoroughwort. A cold infusion of the same, may be also drank during the operation of the cathartic.

After the operation of the cathartic, the following tonic should be used:—

Take of Dogwood, (bark of the root,).....	1	drachm.
“ Sculleap.....	1	do
“ Quinine.....	$\frac{1}{2}$	do

Pulverize the dogwood bark and the sculleap, and mix it well with the quinine; divide this into nine parts and take three parts each day, at suitable intervals.

The patient should be washed, all over his body and limbs, with the rebe facient solution; and if this does not keep the surface moist, the rubefacient oil must be applied freely, once a day, in addition to this; or if the oil is not at hand, the bathing drops may be used in its stead.

The sudorific powder, should also be used, in tea spoonful doses, or less if it should nauseate too much, once every two hours, alternating with the tonic.

Should the disease not yield by the second day after the cathartic is given, the emetic and baths, and also the cathartic, if necessary should be repeated, and then followed up as before.

When there is much fever and headache, and especially if there should be delirium, the patient should be sponged with cold water, and if this does not let down the fever, he should be wrapped up in a wet sheet, drinking at the same time a tea of thoroughwort.

CONTINUED FEVER.

(*Febris Continua.*)

The term *continued fever*, is only a relative name, as it is a remarkably rare occurrence, if indeed it ever happens, that a fever runs its entire course, without an intermission of some character. The name is therefore only given, to distinguish those fevers which have no well marked intermissions, or remissions, from those already described, which have such marked intervals of relief. To this class belong *synocha* or simple inflammatory fever, *synochus*, *typhus*, *typhoid*, and the plague. But it is thought best, to treat all these separately, for there is no one of them that does not possess such peculiarities as are well calculated to distinguish them. It is therefore designed to treat *synochus* alone, under this head, as it best answers to the name; it likewise being that form of fever most generally known, through the country as *simple continued fever*. This grade of fever, is that most generally met in common practice; it occurs in all seasons, climates, and places; and among all classes of people.

Symptoms.—This, like some other forms of fever, admits of such a variety of modifications, that it is difficult to give such

a history of the symptoms, as will enable those unacquainted with it, readily to recognize it in all its modifications. The affection is sometimes so slight, that medicine does not become necessary; and again, it occurs in a form so violent, that it admits of cure with difficulty. Before the fever rises, the patient generally complains of considerable debility; corporal and mental languor, which is succeeded by chills, which are soon attended alternately with flashes of heat, that continue until finally the fevers sets in. In more aggravated cases, the fever is ushered in by a distinct cold stage, characterized by great lassitude, restlessness, a feeling of tension and confusion in the brain, oppressed and anxious breathing, feebleness and quickness of pulse, a clammy tongue, disgust for food, flatulency, frequent nausea, retching, and vomiting. The fever now sets in; the pulse becomes full and frequent, about 112 to the minute; the face flushed, and the carotid and temporal arteries may be seen to throb considerably. The patient suffers much from headache and thirst, and becomes very restless and peevish. The tongue is, at first, white, but soon becomes covered by darkish brown fur; the skin is hot and dry; the urine is generally high colored and without sediment; the bowels are torpid, and the discharges assume a clay-colored appearance. Intolerance of light and sound is generally complained of, even from the beginning, and now the patient is often delirious through the night, but is generally relieved against morning, when sometimes a little sleep is obtained.

These symptoms generally hold on, for from six to ten days, with little variation, only that, sometimes, a short interval of ease is enjoyed in the morning. About this time a change may be looked for; the disease from this generally declines, or the patient either dies, or sinks into a low *typhus*.

Cause.—This fever is generally brought on by exposure to cold, and fatigue from hard labor, or other exercise. Any cause, in short, that is calculated to diminish the vital force, may bring on continued fever. Sudden changes of the weather from hot to cold; the wearing of damp or wet clothes; cooling suddenly when in a perspiration; drinking copiously of cold water while the body is heated by exercise; intemperance; excessive venery; and violent passions, are all capable of bringing on the disease, but cold is by far the most fruitful cause of fever.

By careful attention to the description of the symptoms, simple continued fever may generally be distinguished from all others; but as already hinted, the modifications of this grade of fever are quite various, and therefore, some difficul-

ty in its diagnosis may sometimes be experienced. But happily the treatment of this, and those other forms of fever with which it is most likely to be confounded, varies but little.

Ordinary fevers of this kind, are not generally dangerous, but the more difficult cases need care.

If the strength of the patient keeps up well, and if the harshness of the skin should occasionally break into a moisture, and the tongue clean off from the centre, the signs are good.

But should the patient sink rapidly; his breathing become hurried; the pupils of his eyes dilate; the pulse become small and sharp; or should the delirium increase; and should there be much nervous twitching, and picking of the bed-clothes, and the patient manifest an urgent desire "*to go home*;" then much danger may be apprehended.

Treatment.—In mild cases of continued fever, nothing more may be necessary, than to bathe the surface freely with the bathing drops, and drinking freely of a strong decoction of thoroughwort, until perspiration takes place; when the fever may be thrown off by the help of frequent doses of the sudorific powders. But in violent cases it may be well to carry the patient through one or more courses of the vapor baths, and lobelia emetic in the onset; for in these fevers, the stomach soon becomes disordered, and when it is out of order, it is in vain to attempt a cure without cleansing it. As to the propriety of the use of the baths, there can be no question, seeing that in nine cases out of ten, the disease arises from the effects of cold.

In order to keep up a perspiration, the emetic should be followed up with the free use of the sudorific powders, or thoroughwort infusion. The body and limbs should be well bathed with the rubefacient solution, or what is better, the bathing drops; and the bowels should be kept open, with the use of enemas, composed of an infusion of thoroughwort, adding mandrake root, and tincture of myrrh, a tea spoonful of each, to every injection.

The main object in the cure of all fevers, is to keep the stomach and bowels in good order, and the skin moist; and if this is done, all will be safe. As soon as the skin is well relaxed; and the excretions well restored, the use of tonics may be commenced, and perhaps the tonic powder, in tea spoonful doses, three times a day, will be as good as any other.

It should be remarked, that if there is any subsultus tendinum or muscular twitching, the nervine tonic must be used.

If the skin is not too much bound or contracted, the diaphoretic powders may be used alternately with the sudorific powders.

If at any time through the treatment, it should become difficult to keep the surface moist, the vapor must be repeated, and the emetic too, if necessary.

The diet should be spare and well regulated.

INFLAMMATORY FEVER.

(*Synocha.*)

This grade of fever, in opposition to others, is named *inflammatory*, as it is attended with the highest grade of febrile excitement. The fever rises suddenly with great inflammation, and is strongly illustrative of the new theory of fever.

Symptoms.—The fever is generally ushered in with distinct chills, or rigors, attended with lassitude and debility, which is soon followed with a flushed countenance, a hot skin, and headache. The pulse is full and vigorous, and about one hundred and ten, to a hundred and twenty in the minute; the eyes look sparkling, full, and are painful and sensitive to the light; the temporal and carotid arteries throb violently; the mouth and throat are dry, and the tongue furred with white in the centre, and is very red on the sides. Breathing becomes difficult and hurried, and the thirst for cold water intolerable: the bowels are torpid, and the urine scanty and high colored, somewhat like brandy. Sometimes there is a humming noise in the ears, and there is always a sensitiveness to harsh sounds and noise. The fever, sometimes, runs so high as to affect the brain, and is attended with delirium.

These symptoms generally run on for four or five days, increasing, and the disease, if not relieved, usually continues about nine days, but sometimes longer. The patient is generally better in the morning, and worse at night.

Cause.—The disease is generally brought on by the same causes that gave rise to continued fever, especially by cold, and checked perspiration. High solar heat, mechanical injuries, violent passions, and intemperance, often give rise to it.

Inflammatory fever may be distinguished from all others,

by the purely inflammatory action that characterizes its excitement; for in this, there seems to be no other morbid phenomena developed, than the active oxydation of the blood. Inflammatory fever is characterized by the same general symptoms that attend inflammation.

In this affection, a free perspiration, diarrhœa, or copious urinary discharges, containing considerable brown sediment, may be considered as favorable symptoms. But if the fever runs high for many days, attended with an unusual quick and hard pulse, accompanied with early delirium, picking of the bed clothes, and sudden jerkings, involuntary discharges by stool and urine, the termination is to be dreaded.

Treatment.—When the fever is high, it is well to commence by sponging the whole body with cold water, which is admirably calculated to let down the heat, to the great comfort of the patient. After this, the great object will be, to get the patient into a copious sweat; and for this purpose the *sudorific powder* should be used, but it should be given in small doses, often repeated, until the system becomes relaxed, when it may be given freely. The vapor bath should always be used to promote perspiration when it cannot be produced by other more simple means. Broken doses of lobelia given once in 15 minutes, will promote this object remarkably. When the skin is dry and harsh, and this condition should not readily yield to the means here recommended, the body and limbs must be well bathed with warm water, in which a table spoonful of saleratus is dissolved, and this to be followed with the *bathing drops*, frequently applied. As soon as the patient is brought into a perspiration, a lobelia emetic should be administered, and during the operation an infusion of thoroughwort, or pennyroyal, should be drank freely. It should be recollected that it is not best to use much pepper, or active stimulants in fevers, while the skin is dry and contracted.—The relaxants and milder diaphoretics, or sudorifics, and anti-spasmodics must be used. But when the skin is free, cayenne pepper and other active stimulants may be given, even in large doses. Astringents are often used in the form of the common diaphoretic, or composition powders; but this class of remedies should not be used in these cases, especially while the skin is contracted. In violent cases, it may be advisable to use the *vapor* and *lobelia* in regular courses, and repeated occasionally, until the fever is broken up. When there is much headache, which, if it does not yield readily to those means already prescribed, a dose of mandrake or anti-bilious pills should be administered, especially, if the bowels should be

bloated and tender. For this purpose, the use of the syringe should be frequently practiced. The head may also be relieved by cold applications, such as vinegar and water, applied by means of a cloth. Sinapisms, or mustard plasters, and also, bruised horse-radish leaves, applied to the feet, will generally relieve the head.

Tonics.—In this, as in other cases of fever, the use of tonics should be commenced as soon as the system is prepared for them; that is, when all obstructions are removed. They are intended to strengthen, and brace up the system. For this purpose, the spiced bitters or bitter tonic will answer very well.

TYPHUS FEVER.

(*Enccia Typhus.*)

It is difficult to point out all the various morbid conditions, that have been known by this name. By some physicians, all low fevers, are called *typhus*; and others again confound under this name all low fevers which are accompanied by stupor and delirium.

This disease has generally been divided, in modern times, into two varieties, called *typhus mitior* or *mild typhus*, and *typhus gravior* or *malignant typhus*. More recently, a new division has been made, and a variety of typhus has been set off as a distinct disease, to be known under the name *typhoid fever*; this will be treated under a separate head.

Typhus fever, as now recognized by many of the most popular authors, is a distinct idiopathic disease, having an independent origin; commencing like synochus, and then passing into a low state, which is characterized by a stunned or torpid condition of the sensorial powers, with delirium, and great prostration of strength. But it is evident that typhus may follow as a result of nearly all continued fevers, and also in some cases of *remittents*; especially if not rightly managed in medical treatment.

Symptoms.—Typhus fever commences, when it is not the sequel of some other febrile condition, usually, with the following premonitory symptoms, viz; “A peculiar uneasy sensation

in the pit of the stomach, want of appetite, slight giddiness and nausea, pale, shrunk, and dejected countenance, dull and heavy eyes, often tremor of the hands, and a general feeling of weariness, debility, and disinclination to mental and corporal action. These premonitory symptoms usually continue from three to six days, terminating in those which mark the stage of *invasion*,—viz; slight chills, alternating with flushes of heat; an entire disgust for every kind of food; tongue covered with a thick whitish fur; considerable nausea, and sometimes vomiting; a quick, small, and irregular pulse; a confused and heavy sensation in the head, and increased mental and physical depression. This stage generally occupies from six to twelve hours, and terminates in the stage of *excitement*. The febrile heat now increases considerably, the face is slightly flushed, the pulse rises in strength and fulness; the skin becomes dry, and the lips parched: there is a considerable thirst for cool drinks, the tongue becomes more furred and slimy, the bowels are usually torpid, the mind is more confused, the patient fretful, restless, and watchful, with an anxious expression of the countenance; the urine is small in quantity and reddish, the head feels heavy, much confused and vertiginous; during the first two days of this stage, occasional manifestations of slight delirium occur during the night. About the end of the second or during the third day of this stage, slight catarrhal symptoms usually supervene, such as suffused and injected eyes, moderately inflamed fauces, somewhat painful deglutition, more or less oppression in the chest attended, generally, with a short dry cough. There is often some tension and tenderness in the hypochondrium, [side of the stomach,] especially the right one.

“Pains in the back, loins, and extremities, are rarely absent in this stage, and in most cases a general soreness is experienced throughout the whole body. Towards the close of the third day of the stage of excitement, there is usually much giddiness and sensorial obtuseness [dullness] present; the patient appearing, even at this early period of the disease, as if under the influence of some narcotic. The cerebral functions now become more and more disturbed, hearing becomes obtuse, delirium more frequent and considerable, and the general torpor gradually increases. Hildebrand asserts that a peculiar milliary exanthema [eruption] occurs on the surface about the fourth day of this stage, which he considers essential to the perfect and regular development of the disease. The same observation is made by Hartman. One of the most striking characteristic phenomena in typhus, is the almost insurmountable aversion to corporeal and intellectual exertion manifes-

ted throughout nearly the whole course of the disease. The patient moves slowly, and seemingly with great reluctance, and his answers to questions are hesitating, short and peevish. The stage of excitement generally continues about six or seven days, before it terminates in the stage of *collapse*, though this *sinking* stage sometimes supervenes [sets in,] at a much earlier period; and occasionally comes on a few days later."—(*Eberle*.)

The patient now becomes very feeble and prostrated. The tongue becomes thickly covered with a brown and, finally, black coat; the teeth encrusted with black sordes; there is, generally, much subsultus tendinum or twitching of the muscles. There is also, a very peculiar biting heat of the skin, and sometimes the latter turns purple or black in spots. The discharges from the bowels, which often become thin and watery, are exceedingly offensive; and as the disease advances, the patient becomes indifferent to all surrounding objects, will not often even notice his most intimate friends whom he has not seen for a long time; when spoken to, his answers are short and unintelligent, and are generally ended with a low muttering delirium. The voice becomes peculiarly strange and sepulchral. As the patient gets lower, the coma or stupor becomes more constant and complete, and it is now with difficulty that the patient is aroused at all, and even when he is made to speak, it will only be a word or two, when he will again fall back into a deep state of stupor. The easiest time the patient has, is, generally, in the morning. Before dissolution, the poor sufferer usually experiences a respite, lasting longer or shorter, but generally several hours, in which he possesses his senses, and mental faculties, nearly as well as in health. This is certainly a great blessing; the dying man may know his danger, and his friends and relatives may enjoy the great satisfaction of conversing with a friend whom they shall shortly see no more on earth. This relief is well calculated to deceive many, who are flattered thereby to expect a speedy recovery, whereas, it is only the precursor or forerunner of death. After this respite, the patient again sinks rapidly into the former condition, and continues growing worse until he dies.

Cause.—The cause of typhus fever is by some referred entirely to a specific contagion, and it is obvious that under some circumstances it may be communicated in this way. In densely populated cities, where the air must of necessity be more or less contaminated with putrid effluvia arising from the decomposition of animal matter; and in camps, hospitals,

jails, and in the miserable hovels of some of the poor where due cleanliness is not observed, this disease is always found to be much more prevalent. It is stated that during the campaigns of the French against Russia the typhus contagion, which was generated in the hospitals and houses crowded with prisoners and the sick, was communicated to the inhabitants along the road by which the soldiers returned; and that the disease from this, afterwards, spread gradually into the adjacent districts, until it became very common. The route of the army, returning from Poland through Germany, could be readily traced by the desolating train of the disease that followed.

The difference between the *miasma* that generates typhus and remittent, or intermittent fevers, is, that the latter arises from the decomposition of vegetables, while the former is caused by the decomposition of animal matter. But whatever the character of the contagion may be, it is certain that unless debility supervenes, and thus subjects the system to its influence, those exposed to the contagion will pass with impunity. Every cause of debility, such as blood-letting, the use of poisonous minerals, drastic purges, cold, fatigue, &c., must be carefully avoided. The prevalence of the disease is much enhanced by a certain train of circumstances that are generally to be witnessed in all families, which this disease has invaded. Such is the dread entertained for it, that as soon as a member of a family is taken down with it, *all hearts fail*, despondency sinks the spirits, the appetite declines, sleep flees away, and a permanent debility sets in. This state of things illy qualify persons to go through the hardships and fatigues brought upon the friends of the sick, by their solicitude and anxiety. If now the chamber or sick room is neglected, and not sufficiently ventilated, and cleansed, those thus exposed, are almost certain to contract the affection. But all this need not happen, if the precaution be observed, that collateral circumstances alone, make this disease contagious.

Abatement of the heat and thirst, moisture of the surface, and cleansing of the tongue, but especially the subsidence of the delirium and stupor, may be regarded as favorable symptoms.

The unfavorable symptoms, are, violent delirium, unusually small intermitting and fluttering pulse, loss of vision, difficulty of deglutition or swallowing, involuntary stools and urine, distortion of the muscles of the face, unusual staring, and change of the countenance, &c.

Treatment.—In the very onset, the patient should be carried

through a course of the vapor bath and lobelia emetic, which is to be followed with a dose of the anti-bilious pills; during the operation of the emetic, as well as the pills, the strength of the patient should be sustained by nourishing broths, or porridge. The baths and emetics must be repeated, if the distressing and febrile symptoms do not yield to the other means, that may be employed. From the commencement, cayenne pepper should be freely and perseveringly employed, both internally and externally; and the compound tincture of myrrh should be occasionally used. Enemas, composed of an infusion, of the astringent tonic and as much compound tincture of *myrrh* as the patient can bear, should be administered, three or four times in the course of twenty four hours. But should the bowels not be kept open by those means, this end must be accomplished by an occasional dose of rhubarb, for if the bowels are not protected from morbid accumulation, the delirium, and danger will always be greater. But the precaution not to use any unnecessary physic or any other means calculated to reduce the strength of the patient rapidly, is very important. The nervine tonic should be freely used to calm the nervous system.

Common pepper sauce is a very good article to be used in typhus fever; and when there are strong symptoms of putridity, charcoal properly prepared, should be freely used; for this purpose, yeast is also recommended highly by some.

Frictions and rubefacients.—There is no disease, in which these means are more important, than in typhus fever. The surface should be frequently washed off by the use of the *rubefacient wash*, and afterwards, well bathed with *bathing drops*; but should they not prove sufficiently active, the rubefacient oil must be used.

Ventilation.—Great care should be taken to keep the patient's room well ventilated, and the chamber mug should always contain some chloride of lime, which can be procured of the apothecary at a small price. By means of the latter article, the effluvia attending typhus fever, can be entirely neutralized.

Tonics.—The use of active tonics, in this complaint, is very important. The dogwood, or columbo, or any other good bitter preparation, should be early used. The diet also, should be nourishing and well regulated.

TYPHOID FEVER.

(Dysentery.)

This affection, as already noticed, has generally been confounded with typhus fever, and the English physicians, are still reluctant about admitting typhoid fever as worthy of consideration, separate from typhus. But in our country and France, it is pretty generally recognized as a different affection. The disease, anatomically considered, seems more particularly to implicate the bowels and brain. Post mortem examinations have discovered extensive affections of the mucous membrane of the lower part of the small, and upper part of the large intestines, and particularly the glands of Peyer, and sometimes those of Brunner, (so named after the men who discovered them.) Opposite, of those patches, the glands in the mesentery, are also in a diseased and enlarged state. The spleen, also, in nearly all cases, is softened and enlarged; in some cases, it is found four or five times its natural size.

Symptoms.—The symptoms of typhoid fever, are, most of them nearly the same as typhus. Those of the first four or five days, need not here be enumerated, as they can seldom, in the main, be distinguished from those attending typhus in the corresponding stage. About this time, or perhaps sooner, a diarrhœa sets in, and is an almost constant attendant, and about the sixth day, a peculiar eruption breaks out, over the breast and abdomen, called *rose patches* or *sudamina*. The bowels bloat considerably, and the abdomen becomes tense, and the spleen often swells so as to be distinctly felt externally under the edge of the ribs. Like typhus, this fever is characterized by great stupor, and generally, more or less delirium. The tongue is, generally, considerably coated, dry, and glossy along the edges, often cracked, and bleeding; the countenance is red or purpleish, and suffused; the expression sunken, vacant, or wild, and spasms of the lips and muscles of the jaws are not unfrequent. The pulse, which at first, is not generally very much accelerated, in the more advanced stage, grows more frequent and tense. Bleeding at the nose, and from the bowels, is not unfrequently an attendant. Typhoid fever is not generally considered contagious.

Cause.—Among the various agents that give rise to this af-

fection, might be named all those that produce typhus, excepting the contagion. It would seem that in connection with the common febrile agencies of this affection, there is found a collateral or concurrent one, that determines the morbid influence to the bowels, and inferior glands. Now, the cause of typhoid fever is well illustrated, if a profile of the common causes of continued fevers, and those of dysenteries, are viewed together, and as typhoid affections are generally the most prevalent in the same season, in which dysenteries are most common, this view of the matter is entitled to much credit.

Typhoid fever may be distinguished from typhus, by the diarrhœa, headache, bloated condition of the bowels, rose spots, and the enlargement of the spleen.

When this affection terminates in health, it generally continues only from two to four or five weeks, when it is overcome by the vital force. The affection is not generally considered as dangerous as typhus.

Among the favorable symptoms, may be reckoned, the subsidence of the stupor and headache, return of memory, free perspiration, copious discharge of urine, and natural appearance of the stools.

But it is always discouraging to see the delirium and headache continue, the pulse frequent and low, purple cheeks, involuntary discharges in bed, retention of urine, irregular breathing, rigidity of the muscles, convulsive movements, cold extremities with the nails turning to a purpleish black, loss of vision and hearing, and distortions of the countenance.

Treatment.—In this disease, the first object to be accomplished, is to get up an action in the surface; this may be done in the following way; apply the vapor bath until the patient perspires freely, then wipe off and apply the *rubefacient oil* or *bathing drops*; after this, a good dose of the neutralizing mixture should be given, and followed up with additional doses, every hour or two, until the bowels are well cleansed. This will carry off an astonishing amount of filth from the bowels. If the patient is not relieved by this, he must have another course of the vapor, and as soon as through with this, he should have a good dose of lobelia, to be repeated every ten or fifteen minutes, until copious vomiting is produced, which must be followed up with the free use of the sudorific, diaphoretic, or Thomson's composition powders. The use of the syringe must not be neglected in this affection; as the bowels need the application of the infusion of astringent tonic with a little of Thomson's No. 6, in it. The bowels should be kept open with the use of the *neutralizing* mixture, administered

every other day in doses large enough to move them. The cholera syrup is an excellent medicine in this disease, and may be freely used when the bowels are cleansed. To insure success in the treatment, the skin must be kept moist constantly, by the use of diaphoretics and liniments, or other appropriate means. The nervine tonic, should there be much nervous irritation, must be used in proper doses several times a day, to calm the nervous system, and the use of the bitter tonics must be early instituted. Fomentations applied externally, are sometimes of signal benefit to the bowels.

Diet.—The diet should be light and nourishing, but should always be used in moderate quantities. Over-eating, in this disease, is always attended by serious consequences. Slippery elm water affords a very good drink.

YELLOW FEVER.

(*Febris Ictericæ.*)

This is a disease of warm climates, raging more in the tropics than elsewhere, especially in the West Indies. But in warm seasons it has been known to visit with violence, places as far north as Boston, Massachusetts. Medical men are much divided in relation to the cause and character of this form of fever. Some consider it a species of the indigenous remittent fever of this country, and that it is brought on by the same general cause; while others consider it a distinct disease, which is propagated by a specific contagion that originated in the East Indies, and from thence conveyed to the West Indies, and thence to the continent of North America. Sauvages says, that it was imported into Martinique in the year 1686, from Siam, by a ship called *Oriflame*. It first appeared in this country in the autumn of 1699,* in Philadelphia, and it is stated that it appeared, the same season, in Charleston, S. C. In 1702, it appeared in New York, and in 1703 it re-appeared in Charleston; and it appears from Dr. Lining, that it also prevailed in this city, in the years 1732, 1739, 1745, and 1748; and from Dr. Harris, it would seem that it

*It appears, however, from Hutchison's history of New England, that a fever similar in character, was imported into Boston, from Martinique, by the fleet of Sir Francis Wheeler, in the year 1693.

was again known there in 1792, but perhaps he means 1794. It is certain, however, that it had appeared there also in 1761. It re-appeared in Philadelphia in the year 1741, and prevailed, also, in 1747, and 1762. It also re-appeared in New York in 1748, after which it was not known again, in this country until the year 1793, when it prevailed again in Philadelphia with dreadful mortality, and the following year Charleston was again visited. New York suffered from it again, the year after it occurred, this time, at Charleston; since which time it has been of very frequent occurrence in these, as well as many other places on the seacoast from Maine to Louisiana, and indeed not only on the seacoast, but far in the interior of some of the southern States.

Symptoms.—Yellow fever usually commences suddenly, with a sense of giddiness, headache accompanied by chills and shivering, pain in the limbs and back. This is succeeded, generally, in from a few, to twelve hours, with the fever which is marked by a flushed countenance, red eyes, extreme headache, great thirst, and throbbing of the arteries. The tongue though sometimes clean, is generally a little coated with white; there is usually a want of appetite,* and a sensation of weight and oppression, and not unfrequently, pain at the stomach; and in the course of 12 to 24 hours after the fever sets in, the patient becomes harrassed with distressing nausea and vomiting, which is aggravated by drinks. The matter thrown up consists, at first, of such fluids as are drank, but this is often followed with a considerable bilious matter, very acrid to the taste. The violence of the fever now increases; the patient becomes restless and anxious; “the countenance assumes an indescribable expression of distress and hopelessness.” These symptoms generally increase for 36 hours, and then give way or decrease for a similar length of time, when the patient either recovers, or enjoys a short respite or remission only to prepare for another attack of still greater severity than the first paroxysm. The poor sufferer, in a few hours, becomes distressed with a severe burning and painful sensation at the stomach, accompanied with an almost constant sickness and straining to vomit; the matter thrown up, at this stage, consists of a greenish watery mass, of the consistence of mucilage, containing many minute flakes floating through it. The thirst for cold water is intense, but all drinks serve only to aggravate the nausea and vomiting. The eyes are yellow, and the skin about the neck and breast also become considerably

*It has been observed that, in some cases there is an urgent hunger experienced by the patient at the subsidence of the first paroxysm.

stained by the diffusion of bile. At this period also, sometimes, the yellow appearance extends over the body and limbs, forming a dirty, yellow color of the entire body, whence the name of the disease; but if this diffusion into the capillaries does not occur at a period so early, the yellowness of the skin will not generally become very prominent.

This second stage, generally, continues about as long as the first, during which time many die; but those who survive either end from this period, or shortly pass into the third stage, which differs considerably from either of the two first. The pulse now sinks rapidly; the tongue is coated with a brown or black fur; the vomiting is almost continuous and exceedingly severe, and the matter now ejected is of a dark brown or black, resembling coffee grounds, (called the *black vomit*;) suspended in a glary or yellowish brown liquid; the burning in the stomach becomes intolerable; the discharges from the bowels are green or black; and frightful hæmorrhages often ensue. The extremities grow cold; and hiccough, and violent convulsions close the scene; or the patient may sink away from the loss of blood. Delirium often sets in before death.

Cause.—As already hinted, there has been much difference of opinion among physicians, as to the cause of this disease; but it is now pretty generally conceded that it is most commonly of *miasmatic* origin, but that it is not dependent on the putrid effluvia, arising from the decomposition of vegetable matter, alone, as it may, and does frequently arise, and prevail alarmingly, from *ultra-miasmata*, or the putrid effluvia arising from the decomposition of animal matter, and hence the poison communicated by these laboring under the disease, is a fruitful source of *yellow fever*.

Dr. Thomson considered that the principle in the infected atmosphere, which is the cause of this disease, is a *nitrous gas*,* which is very poisonous, and which from its known properties or character, is entirely adequate to the production of this disease. He states, that when it arises from marshes or the decomposition of vegetables containing *nitrogen*, it, from its specific gravity (being a little greater than that of the atmosphere,) is confined to low countries, and hence the more frequent occurrence of this, and other miasmatic diseases, in low grounds and along streams, on the surface of which, he says, this poison is carried in great density.

The *protoxide of nitrogen* is of a specific gravity a little less than that of the atmosphere, and if Dr. Thomson's views are

*Deutoxide of nitrogen.

correct, this combination of nitrogen may account for the occasional appearances of miasmatic diseases on high grounds.

The suddenness of the attack, the extreme nausea and irritability of the stomach, the *black vomit*, and the yellowness of the skin, are the principal characteristics of this complaint. But these peculiarities are chiefly confined to the more violent cases of the disease. When the attack is more mild the symptoms very much resemble the common remittent fever, only, it is considerably more attended by irritability of the stomach.

Yellow fever may justly be considered a dangerous disease; sometimes proving rapidly fatal, even in a few hours. Its duration is generally, from five to seven days. The unfavorable signs, are the black vomit, delirium, and convulsions.

Treatment.—Dr. Thomson gives the following:—

"This disease should be treated with the most rigorous course of medicine [*i. e.* *vapor baths, lobelia emetics, and enemata,*] and a continued perspiration must be kept up. The surface should often be bathed with a strong alkaline wash, made of hard wood ashes put into water and allowed to settle and then mixed with whisky or West India rum, to clear the glutinous substance from the pores, and prevent an absorption of the morbid matter that has worked out by perspiration. Baths should be used daily, and the temperature of the system generally, should be kept as regular, and as near that of health as artificial means will effect it. Soups and gruels, highly seasoned, should be taken as food; and strong tonic mixtures, such as bitters, syrup, &c., to strengthen, should be used as soon as the state of the stomach will permit of such treatment. The saline properties of the blood become much reduced by this disease, by which means the system becomes very putrid, therefore pepper and salt should be used in great profusion in the nourishment after thorough courses of medicine." The Doctor's object may be effected in the following way: in severe attacks, the patient, after taking a few doses of cayenne pepper, should be immediately placed over a vapor bath, which should be raised gradually until the free perspiration appears, when the body should be wiped with a dry towel, and the following wash applied:—

Take of common salt,.....	2 table spoonfuls.
" Cayenne pepper.	1½ do.

Pour on half a pint of boiling water; now take a spoon and stir it until the salt is dissolved.

This should be prepared while the patient is in the bath, so as to have it ready when it is needed. As soon as the patient is thus bathed, he must have an active lobelia emetic; and an enema, composed of an infusion of thoroughwort, to which should be added a tea spoonful of brown lobelia, and one teaspoonful of the tincture of myrrh. During the operation of the emetic, the patient should drink freely of an infusion of thoroughwort and n. rvine tonic, and must also be well supported by nourishing broths. Prepared charcoal, if taken after the operation of the emetic, in table spoonful doses, will generally quiet the stomach. The bowels must be kept free with the use of enemas. Should this first course not break up the disease, it must be repeated until the urgent symptoms yield; the lobelia need not, perhaps, be used in such large quantities, in the subsequent courses; nevertheless, if the disease should still prove obstinate, it must be used as at first. Mild cases of this disease may be treated in the same way recommended for remittent fever.

As soon as the skin becomes permanently relaxed, active tonics should, in this disease always be instituted.

The apartment of the sick must be well ventilated and cleanliness be strictly observed. Chloride of lime may be used to correct the effluvia; see this article by reference to the index.

SCARLET FEVER.

(*Scarlatina.*)

This disease like most others, is susceptible of various degrees, as to its violence, and hence, has generally been divided by authors, into several grades. The three following, however, alone are worthy of consideration in the present case, namely, *scarlatina simplex*, *s. anginosa*, and *s. maligna*.—The first of the varieties, consist of a mild attack of the disease, in which the fever seldom runs high, but there is an eruption or efflorescence on the surface, giving to the skin quite a scarlet appearance, which generally sets in, in the course of from two to three days after the appearance of the usual premonitories of the fever, such as lassitude, stretching, drowsiness, and chills. This variety of the disease generally passes off in the course of a few days; the eruption by desquamation.

The second, *scarlatina anginosa*, is characterized by a very high fever,* and a more regular or complete eruption, attended, moreover, with inflammation and ulceration of the *fauces*, and *throat*. The fever is early accompanied with a kind of stiffness and dull pain in the muscles of the neck, and under the ears and angles of the jaw. Deglutition now becomes difficult and painful, and the fauces, on examination, will be found to be of a scarlet appearance, like the surface, and to be enlarged. In bad cases, the inflammation, in these parts, runs very high, and in many cases, results in suppuration.

The scarlet eruption, in this variety, does not appear as early in the disease as it does in the simple variety, and although it is most generally more complete when it does appear, yet it frequently recedes the second day after its appearance, and is not observed again for a number of days, when it is again developed. It may be regarded as a general rule, that as many days as the eruption disappears, so long will the crisis of the disease be protracted, as the patient does not generally improve during this time.

If the fever declines as early as the fourth or fifth day, the inflammation of the throat will be likely to pass off with the fever and eruption, and suppuration may not ensue. But should the fever run very high and continue beyond this period, and should the swelling and inflammation in the throat be considerable, ulceration may be expected.

The third variety, *s. maligna*, presents a series of phenomena still more to be dreaded; but it is indeed probable that a large majority of these cases, follow as a result of bad management in the medical treatment. It is deeply to be deplored that the fashionable practice of medical treatment, in many cases of disease, is more injurious than beneficial. The most active poisons known constitute many of the articles most depended upon, by many physicians, in the cure of disease!

“Although this form of the disease usually commences like the preceding variety, it soon betrays its violent and dangerous character. The eruption comes out at uncertain periods from the second to the fourth day; and is usually pale when it first makes its appearance, acquiring, in most instances, a dark or lived hue in the progress of the disease. It is also very irregular in its duration, and often suddenly disappears soon after it appears; and re-appears on some other parts of the body two or three days afterwards. The temperature of the skin is variable and not generally very intense; and the pulse,

*Currie and Wilson have found the temperature even of the surface, as high as 108 to 112 degrees, Fahrenheit.

though in the commencement active, becomes small and feeble in the course of the second day. Delirium generally occurs at an early period, and often continues with occasional intermissions and exacerbations, throughout the subsequent course of the disease. In nearly all cases, the sensorial functions suffer very considerable disturbance; and in aggravated instances, the eyes are dull and inflamed, and the cheeks suffused with a livid flush. The tongue is dry, and covered with a brown or dark fur; the breath fœtid. On examining the fauces, clay colored sloughs are seen on the soft palates and tonsils, which acquire a brown and at last a dark color. The disease, however, sometimes terminates fatally under symptoms of cerebral oppression, before the ulcers become extensive or acquire a very bad appearance. "In general," says Dr. Armstrong, "it is only when the fever is protracted beyond the fourth day, that the ulcers are converted into ill-conditioned, black, and fœtid sloughs." There is generally a large quantity of very viscid mucus secreted and lodged in the fauces, giving rise to difficult respiration, and a rattling noise in the throat. When the sloughs are foul and excessive, a thin acrid fluid is generally discharged from the nose, occasioning irritation and excoriation of the parts with which it comes in contact. In cases of a particularly violent character, collapse supervenes towards the middle or end of the second week of the disease. When this occurs the heat of the surface sinks; the pulse becomes very frequent and feeble; the tongue dark brown or black; the animal powers greatly prostrated; painful diarrhœa often ensues, and in some instances, petechiæ and hemorrhages from various parts occur towards the fatal termination of the disease. The fever and ulcerous affection of the throat frequently exists, without an eruption at any period of the disease. Death sometimes takes place, as early as the second or the third day, and Bateman observes, that occasionally the symptoms continue to be moderate until an advanced period, when they suddenly assume a malignant and rapidly fatal character."—(*Eberle*.)

Cause.—Scarlatina is generally supposed to depend* for its cause on a specific contagion.

Measles, and miliary fever, are the only diseases with which scarlatina is likely to be confounded. During the first or second day, and indeed, during the entire course of the milder grades of this disease, the diagnosis is made out with difficulty. Eberle states that "there is not a single symptom that can be regarded as absolutely peculiar and characteristic of scar-

let fever." It is true that when the disease is fully developed the difficulty will be less, but it often happens that the eruption is wholly or nearly absent; or it may be much diffused and blended; again it may appear in blotches. The following circumstances, however, will generally enable us to distinguish scarlet fever from measles. The eruption in the former, generally comes out earlier, usually within the first 48 hours of the existence of the fever; while in measles, the rash rarely appears before the third day, and most commonly not until the fourth; and in this, the eruption also differs *in character*, from that of scarlatina. In the latter it is more diffused and blended, giving the appearance of a deep blush of the skin, and the eruption is very little elevated above the common surface; whereas in measles the eruption is elevated somewhat above the surrounding parts, and consists of numerous small circular dots, like flea bites, being of a deeper red in their centre, paler on the circumference; so that even though the redness of the spots may run together, yet the skin will nevertheless present a speckled appearance. The color of the eruption in measles, is likewise much more dark than that of the other; but perhaps catarrhal symptoms are the most prominent distinguishing signs, which are also almost invariably attendant on the evolution of measles. The eyes are inflamed, and the tears flow profusely; there is more or less sneezing and cough; while in scarlatina these symptoms do not appear, or are so slight that they are generally overlooked.

The sudamina, or miliary eruption that attends various affections, especially typhoid fever, puerperal fever, &c., (which has by some been considered a separate affection and called *miliary fever*,) slightly resembles the eruption of scarlatina; but on examination it will be found that the *miliary eruption* in scarlet fever only appears in scarlet blotches, whereas, in the eruption attending other fevers, the miliary appearance may be observed to arise from parts of the skin possessing its natural color.

Scarlet fever terminates variously; a variety of other diseases may follow. Dropsies are, however, by far the most general sequels of this disease. Abscesses of the tonsils, swelling in the head and ears, enlargement of the parotid glands, gutta serena, (or loss of sight,) deafness, loss of hair, hysteria, asthma; epilepsy, cutaneous diseases, and many other affections have been known to follow the disease.

A regular abatement of fever, attended with free perspiration, and softness of the skin; lateritious sediment in the urine; soft but full and regular pulse; bright color of the erup-

tion; desquamation or peeling off of the cutis or outer skin; continuation of strength, and return of appetite, may in general, all be regarded as favorable signs.

But if the strength should fail rapidly; the pulse sink, and symptoms of putrefaction supervene; or if violent delirium sets in attended by a glassy appearance of the eyes, and above all, if gangrene of the fauces should occur, the danger will be imminent.

Treatment.—The indications of cure will be readily inferred from the character of the affection. It is evident that the urgency of the case generally corresponds with the deficiency in the developement of the eruptive phenomena; for the case is generally comparatively mild when the eruption comes out early and continues complete. To bring about all the conditions necessary to the successful removal of the contagion or specific virus from the system, is among the first things to be done in the cure. The capillaries seem to be implicated more than any other part of the vascular system; and if obstructions here are the cause of the irregular developement of the eruption, it is well to give attention here. Rubefacients, or what is better, the vapor bath, if it be convenient, must be used early in the treatment. The common bathing drops, or even the rubefacient solution, will be found very serviceable in bringing out the eruption, as well as to let down the fever. In the meantime, if the case be a bad one, an emetic of lobelia should be prepared and administered after the bathing, which should in turn be followed with small but frequent doses of the sudorific powders. The bathing and sudorific powders, should be continued until a favorable crisis is formed.

Local Treatment.—The local symptoms must receive such attention as the circumstances of the case may require. The rubefacient oil should be applied externally to the throat and angles of the jaws, and when ulceration takes place, the astringent gargle will be found of eminent service.

Cayenne Pepper.—With regard to the utility of capsicum in sore throat, there is now but little dispute. Dr. Eberle speaks of it as follows: “The *capsicum* appears to be a particularly valuable exciting remedy in this [*malignant*] variety of the disease. This article was first employed in malignant scarlatina, by Dr. Stephens in a very fatal epidemic which prevailed at St. Christophers, (West Indies,) in 1787, and it has since received the decided approbation of many eminent practition-

ers. The manner of employing it is as follows: take two table spoonfuls of small red pepper, or three tea spoonfuls of common cayenne pepper, and two table spoonfuls of fine salt; beat them into a paste, and pour upon them half a pint of boiling water; this is to be strained, and half a pint of good vinegar added to it. Of this liquor, when cold, a table spoonful is to be taken every half hour by an adult; and the throat should be frequently gargled with it. Stephens asserts that he employed this remedy in about four hundred cases, and with surprising success. The ulcers in the fauces soon cast off their sloughs and commenced to heal, a general pleasant warmth was diffused throughout the whole system, and the vital powers speedily resumed a more active condition." The compound tincture of myrrh, or Thomson's No. 6, is also very good in putrid sore throat.

FITS.

(*Convulsions.*)

It is not designed to treat in this place, all those affections that properly come under the head of convulsions, for these limits would embrace all spasmodic affections, from the slightest twitch (*subsultus*), of the muscles, to the most marked case of apoplexy. The several prominent varieties of spasmodic affection, are considered under separate heads. A few observations on the character and treatment of convulsions in general, so as to prepare the common practitioner to manage properly any case of the kind that may occur in practice, is all that is necessary in this place.

Convulsions arise from morbid irritation of the nervous tissues, which is caused by taking poisons, such as strychnos, (*nux vomica*), prussic acid, antimony, &c.; and by violent agitations of the mind, as by fright and anger; also by irritation arising from intense pain, as from burns and scalds. They are also attendant on teething in children, worms, and various other affections giving rise to much irritation.

Treatment.—The lobelia inflata is among the best anti-spasmodics that we have; the tincture, given in tea spoonful doses, once in five or ten minutes, will afford relief with astonishing promptness. The anti-spasmodic tincture will, in some

cases, operate still more promptly; the dose is the same as for the simple tincture of lobelia. Collaterally with these medicines, a tea of the nervine tonic should be given.

Emetics.—In violent cases, the lobelia or anti-spasmodic tincture must be given in large doses, so as to produce vomiting, which will almost invariably break the fits.

FLUX OF URINE.

(*Diabetes.*)

This affection consists of a morbidly increased secretion of urine, which is discharged frequently, and in large quantities. The disease is attended with great debility and emaciation. "In the latter stages of the complaint the gums become spongy, and the breath offensive, accompanied by difficulty of breathing, and swelling of the feet and legs. The malady has been known to continue for many years, although, it frequently destroys the patient in a few weeks. It is chiefly confined to cold, damp climates."

The urine, although, sometimes of the natural character, is frequently of an entirely different composition. In that variety of the disease called *diabetes mellitus*, it is very sweet, containing much saccharine matter. It is stated that in one case Cruikshank obtained an amount of sugar equal to one twelfth of the weight of the urine, and was collected from the same patient to the amount of 19 troy ounces per day.

Diabetes evidently arises in the majority of instances, from a perverted condition of the other excretory functions. But is sometimes caused by the improper use of strong and irritating diuretics, or by working about turpentine, as by painting, &c.

Treatment.—The indications of cure, are, 1, to obviate the exciting causes, if they can be discovered; 2, to restore the obstructed excretions; and, 3, to tone up the system.

By comparing carefully, the habits of life, as to diet, temperance, and employment, the practitioner may generally detect the exciting causes, which when discovered must be removed, before much relief can be expected from medicine.

Diaphoretics.—To answer the second indication, the use of active diaphoretics become necessary. The common diaphoretic powders are perhaps best for this purpose; the feet should be bathed in warm water while the patient is drinking freely of the tea.

Baths.—After the free use of the rubefacient wash, the vapor bath will be almost certain to restore the functions of the skin, as well as those of the excretories of the lungs. If, after the use of the bath, the skin cannot be kept free and the surface moist, by the use of the diaphoretic drinks, this means must be repeated as occasion may require.

Astringents and Tonics.—A strong infusion of bayberry, used by injection as well as per stomach, is the best single means that the writer has ever yet found in this complaint. It seems to exert an influence over the kidneys more promptly than most other articles. When the bayberry is not at hand, any other good astringents, such as cranesbill and pond lily, will answer as substitutes.

The spiced bitters or bitter tonic compound, must be used to fulfil the third indication.

Local means.—A plaster made by incorporating some of the best cayenne pepper with pitch, if worn over the region of the kidneys, will sometimes be of signal service.

FLUX.

(*Dysentery.*)

Dysentery is a distressing disease effecting the bowels, and is characterized by frequent slimy, or bloody discharges, griping pains, and distressing tenesmus. The disease occurs generally during the latter part of the summer, and autumn.

Symptoms.—Dysentery usually sets in with a sense of lassitude, want of appetite, nausea, bad taste in the mouth, depressed pulse, slight chills alternating with flushes of heat, thirst, dry skin, and transient pains in the bowels. "Sometimes the disease comes on suddenly with griping, mucus and bloody stools and tenesmus, without any premonitory symp-

ptoms; and this is most apt to be the case, when it arises from causes that act immediately on the mucus membrane of the intestines. In general the fever is developed before the proper dysenteric symptoms show themselves; sometimes more or less diarrhœa, with tormina, [severe pain,] precede the occurrence of the febrile irritation; and occasionally mucus and bloody stools with tenesmus, [ineffectual straining at stool,] are the first symptoms. From the commencement of the disease, throughout its whole course, little or no feces, [natural stools,] are discharged spontaneously—the stools consisting entirely of intestinal mucus, mixed with more or less blood. Tenesmus is one of the most constant and characteristic attendants on this affection; and the violence of this painful symptom affords us a pretty accurate measure of the violence and degree of danger of the disease. There is often considerable pain and difficulty experienced in voiding urine. The tormina are extremely violent and distressing, particularly just before the urgent calls to stool are experienced; and a constant soreness is felt in the abdomen. Sometimes the stools consist almost entirely of intestinal mucus, very little or no blood being mixed with it. In most instances, however, a considerable portion of blood is discharged with the mucus, and in some cases the evacuations consist almost wholly of blood. These dysenteric discharges usually have a very peculiar disagreeable smell, but no fœtor in the beginning of the disease; but in the advanced period of violent and dangerous cases, they frequently possess a pungent and cadaverous smell; and often acquire a corroding and sanious character.”—(*Eberle*.)

Treatment.—The writer has had much experience in the treatment of dysenteries, and consequently favorable opportunities of testing all the most popular plans that have been proposed; but the following, in his hands, has proved decidedly the most successful:—Give to an adult, a large tea spoonful of the neutralizing mixture, once every two hours, until the bowels are well cleansed, which may be known by the change of the stools and the relief the patient gains from the effects of the medicine. Now let the patient drink freely of a strong infusion, made by scalding two ounces of either astringent tonic, bayberry, or cranesbill, in a quart of soft water, adding, (after straining it,) four table spoonfuls of white sugar, a gill of brandy, and an ounce of compound tincture of myrrh.—This preparation, if taken in wine glassful doses every two hours, after the neutralizing mixture has done its work, will, in most instances, soon relieve the looseness.

As soon as the bowels are relieved, tonic cordials, or even the cholera syrup, should be used until the patient is entirely restored.

Enemas.—Astringent injections are of incalculable advantage in the treatment of dysenteries, and should never be neglected, especially in the more difficult cases; they restrain the blood, and adstringe the inner coats of the bowels so as to prevent the escape of the fluids into the intestines. By the use of these means in dysentery, the medicine is applied more directly to the parts suffering most, and hence it may be expected that it will do more good than if used in another way.

Diaphoretics.—In this disease the cutaneous exhalents are very inactive; the matter usually passing off in this way, is now discharged through the bowels, by the laws of vicarious action. To restore the excretions of the skin, therefore, becomes a great desideratum. The common diaphoretic powders, here, answer an excellent purpose, and should be used freely. Rubefacients are also very beneficial, they detract the determining powers to the surface.

Stimulating fomentations to the bowels, are indicated when the dysenteric inflammation runs high.

FRACTURES.

Fracture, in surgery, means a division or broken condition of a bone, arising from violence.

“Fractures are either *simple* or *compound*; according as they are accompanied with an external wound, communicating with the ends of the bones or otherwise.

“If the bone is broken in two or more pieces, and there is not an external wound, communicating with the fractured edges of the bone, the fracture is still called *simple*; and on the other hand, if the bone is broken in but one place, and there is an outward wound, the accident is called a *compound* fracture.”—(*Castle.*)

External wounds occurring with fractures, although they may be extensive, do not make the fracture a compound one, unless the injuries are connected.

When fractures are attended with diseases or accidents, which render the indications in the treatment more numerous

that is when the treatment necessarily becomes complicated, requiring various operations or different remedies, the accident is called *complicated fractures*.

Symptoms.—In the long bones, the existence of fracture is sometimes known at once by the position in which the limb is found, as this is often distorted or out of its natural shape, between the joints, so as to make the diagnosis clear.

The crepitus or crackling noise in moving the parts; the change in their form and length, and when the bone is superficial, the inequalities or evenness of its surface, are all pretty sure signs of fracture. The inability to use the parts, and the deep seated pain, and swelling may result from dislocation. Dislocations, also, sometimes, cause quite a crepitation when the parts are moved, owing to the changed condition of the synovial fluid.

Treatment.—The most important things to be done in the treatment of fractures, are to adjust the parts properly, and then to keep them so, long enough for the re-union of the bones.

The first thing to be done, is to relax the muscles of the parts concerned. This may be done either by the use of frequent doses of lobelia, or the anti-spasmodic tincture, or by means of the vapor bath. But the best plan, is to use those means conjointly. If the vapor bath cannot be conveniently applied, the entire limb or part should be enveloped with sheets or large cloths wrung out of hot water, which must be renewed as often as they cool off, until the muscles are completely relaxed. This being done, the limb must be put in such a position as will slacken the muscles alike on every side, and then the bone should be replaced into its natural position. To effect this, a little extension is generally necessary.*

When the bone is properly adjusted, the next object is to keep it in that position. For this purpose, splints, wrappings, or bandages, &c., are necessary. In the line of splints, an infinite number and varieties of patterns have been proposed, and it is now hardly known whose invention answers the best purpose. When the fracture is situated near the middle of any of the long bones, a few simple pieces of shingle, or even strips of stiff paste-board, will answer very well in the absence of any thing better. The edges of the splints must, however, be smoothly trimmed off, or the parts well protected

*The force applied in extension and counter-extension, by some of our surgeons, who are unacquainted with the relaxing power of *steam and lobelia*, is a disgrace to the profession. The writer has a knowledge of a number of instances, in which irreparable injury was done thereby.

by wrappings, so as to prevent injury to the soft parts by the swelling that may take place after the application.

A very good apparatus of the splint kind, may be made of some strips of woollen cloth, by applying to them some gum shellac dissolved in alcohol. These strips although made very hard and stiff by the shellac, may be rendered quite pliable by holding it a few moments before a fire, or by placing it in hot water for an instant. While in this state these strips may be applied to the parts and very neatly moulded to the shape of the limb, and as soon as the gum in the cloth gets cold, it will be firm and unyielding as before it was exposed to the heat, and hence if two or three of them are well secured in this manner around the fractured limb, they will keep it secure.

After the splints are applied, the only remaining particular in the treatment will be, to secure undisturbed rest to the injured part, until it shall have had time enough to recover strength sufficient to support itself.

Should there be much heat and fever about the fracture, after the splints are applied, it may be relieved by the application of cold water or vinegar.

Treatment of compound fractures.—The bones in compound fractures are often forced into the ground, and thus in reducing them make it necessary to clean them, carefully, before they are returned. For this purpose a sponge with warm water should be used.

In reducing compound fractures, the greatest care must be taken not to let any foreign substance remain in the wound among the bones, as it will become a source of protracted irritation and ulceration. All loose splinters and small pieces of bone, should be carefully removed with a suitable pair of forceps.

After the bones are properly adjusted and secured, the wound in the soft parts should be treated, in the main, like any other fresh wound.

The medical treatment in fractures, in addition to the relaxing means, consists in the use of such articles as are calculated to sustain an equal and uninterrupted circulation, and to keep up the vital powers. The diaphoretic powders are a very good medicine to be used as an occasional drink. The bowels should be kept regular, but the patient must not be purged.

The muscles must be kept in a quiet state by the use of the nervine tonic, but if this should not calm the twitching that sometimes comes on; the lobelia, or blue cohosh, should be

used in proper doses in connection with the nervine tonic.

The natural phenomena in the restoration of fractures, is strikingly illustrative of *instinctive* vital action. In these accidents the contiguous parts are always more or less lacerated; the medulla, (*marrow*,) medullary membrane, periosteum, (*membranous covering of the bone*,) cellular tissue, and muscles, are always more or less injured. Bleeding from the ruptured vessels ensues, which surrounds the fragments, passes into the cavities of the bones, and permeates the surrounding cellular tissues; whereupon inflammation takes place in all the parts, which may be considered the first step towards a cure. The cellular tissue that immediately surrounds the bone, now becomes very vascular, is somewhat thickened, loses its elasticity, and acquires a considerable degree of consistence. A number of irregular processes are sent out from this, to the surrounding muscles, which adapt themselves to the design, and in common with the periosteum, (*which is also very much thickened and very vascular*,) join in the formation of a kind of provisional callus or envelope, around and exterior to the fractured ends of the bone. The medullary membrane, (if the bone be hollow,) forms a process of cartilaginous, or rather a fibro-cartilaginous substance, which fills up the whole cavity of the intended new bone, from above till below the fracture. Between these two walls of provisional callus, is now deposited a viscous or gelatinous fluid, which gradually assumes a reddish or rose-colored appearance, and adheres by its margins to this mould or provisional callus. From the twentieth to the fortieth day, (*depending on age and other circumstances*,) this gelatinous substance, thrown out between the ends of the bones, begins to ossify, (*turn to bone*.) Before this time, however, the extravasated blood is absorbed, and the muscles surrounding the external callus have also become considerably liberated, and as the new part of the bone acquires solidity the provisional callus becomes absorbed, thus leaving the parts in their original condition.

FRENCH MEASLES.

(*Roseola*.)

This complaint, which is sometimes called *false measles*, is characterized by rose colored spots of various forms unatten-

ded by swelling or pimples, but occasionally preceded or accompanied by fever. These efflorescences may occur over the whole surface of the body, but are commonly confined to one or more parts. The complaint generally runs its course in from two to eight days.

The affections with which this is most likely to be confounded are measles and scarlet fever. This may however, be distinguished from measles, by the size and appearance of its eruptions, which are much larger than those of that disease; and what is more, the catarrhal symptoms are not generally so prominent in this, as in measles. It may be distinguished from scarlet fever, by the irregularly diffused *raspberry* efflorescence, and tumefaction, that characterize the latter. French measles are not generally considered contagious.

Treatment.—Mild aperients, such as the man root, narrow dock root, and white root, given in the form of teas for several days, will generally be all that is required in this, comparatively, mild affection. Rest and appropriate diet will also favor the cure.

GOITRE.

(*Bronchocele.*)

This affection is characterized by an enlargement of the *thyroid gland*, and is commonly called the *big neck*. The swelling commences on both sides of the larynx and trachea, with the appearance of a spongy tumor, which increases at first very slowly or imperceptibly, but after a number of years, sometimes becomes enormously large.

Bronchocele is seldom attended with pain or any other inconvenience, except its bulk, unless it gets very large, when there is often not only the attendance of pain, but there is also a considerable difficulty of respiration in some cases.

Females are more subject to the disease than males.

Treatment.—A compound made of equal parts of the soft extract of yellow willow, stimulating liniment, and pulverized salt, if applied with friction three times a day, will generally remove the difficulty. The iodine ointment, however, is perhaps entitled to as much confidence as any other single article,

in the treatment of bronchocoele. It should be applied in small quantities with friction, once a day. In the treatment of this affection perseverance is necessary.

GOUT.

(*Arthritis.*)

Gout is an inflammatory affection of the fibrous and ligamentous parts of the joints. It usually first attacks the great toe, and from this it passes to the other toes, the joints of the fingers, and sometimes to the larger articulations.

This is a very distressing disease, being attended with severe pain, which gives rise to numerous sympathetic affections. The functions of the stomach are most apt to become affected with sympathy, and hence gout is attended with indigestion and its attending symptoms.

The disease usually comes on by paroxysms, lasting, sometimes, for a number of weeks, with but little abatement in its violence. It is supposed that the inflammatory action, in some instances, also involves the muscles, and internal organs, that sympathize with the affected articulations, and hence the disease is variously called, *retrograde gout*, *misplaced gout*, *anomalous gout*, &c., according to the location or shifting of the pain.

Treatment.—Inflammatory affections of the ligaments, and other parts about the articulations, are generally pretty hard to relieve, being so remotely situated from the general circulation. Thorough courses of the vapor baths and emetics, administered every day, or every second day, as the urgency of the case may require, are the only means that have yet been found to give relief with any thing like promptness.—The use of those means must therefore be persevered in, until the disease is broken up.

Local means.—A slippery elm poultice with some pulverized lobelia seed and cayenne pepper sprinkled over the surface, and applied to the affected parts will generally be beneficial. For this purpose, the rubefacient oil is very good, and its use should, therefore not be neglected.

Bathing the feet in a strong decoction of the black cohosh,

as hot as it can be borne, will be found very serviceable, especially when the disease is located in the feet.

GRAVEL AND STONE.

(*Calculus.*)

We understand by *gravel*, small sandlike concretions, which pass from the kidneys through the ureters into the bladder, and thence from the system with the urine. The *stone* is a collection of the same substance into a larger bulk. These sometimes pass off in large sizes, and thus produce extreme pain and suffering. When too large to pass through the urethra they will lay in the neck of the bladder; and thus produce great irritation, of the parts, by obstructing the urine. As the water accumulates in the bladder, the patient becomes pressed with a distressing inclination to urinate: but this can be voided only in small quantities; sometimes only drop by drop.

It is thought that the disposition of the system to form gravel or the sand like concretions, is not favorable to the formation of stone, that is, those who discharge gravel are seldom troubled with the stone or larger formations.

Treatment.—Alkaline preparations are mostly depended on in the treatment of gravelly complaints, and they are, in general, useful. The disposition of the urine to favor these formations, is, in the majority of instances dependent on the agency of *lithic acid*. The alkalies may, therefore, do much to obviate the chemical phenomena producing these morbid concretions.

There is, however, one variety of these concretions, in which earthy phosphates seem to constitute the material. In the treatment of this variety, the alkalies will not only prove useless, but may indeed ultimately enhance the difficulty.

The diagnosis or symptoms distinguishing between these varieties of gravel, although very important, are somewhat obscure. The sediment or deposits in the urine, afford us the principal means of gaining a knowledge on this point: when they are colored, that is, if they are red, yellowish, or brown, they are caused by the predominance of acid; but when they are pale or white, they consist chiefly of earthy phosphates.

When there is a discharge of the sandlike material, or of a calculus, our diagnostics are still better.

All the red, brown, and yellowish appearing concretions, as a general rule, demand in their treatment the use of alkalies. In earthy phosphate concretions or those of a pale or whitish color resembling chalk both in appearance and consistence, are managed best by the use of diluted muriatic acid. Perhaps the best way to take the acid, is to drop it into a glass with some slippery elm water: the dose is from ten to fifteen drops, three or four times a day.

Soda and sub. carbonate of potash, are the alkalies generally used in the treatment of gravelly complaints; they may be given in tea-spoonful doses, two or three times a day.

Diuretics.—This class of agents is also of value in the treatment of gravelly affections, for while diuretics favor the escape of the concretions, they also attenuate or weaken the chemical agencies causing them, by the increase of fresh and unimpregnated urinary secretions that they produce. The queen of the meadow, in the hands of the writer, has given the most encouraging evidence of its utility in these affections. The medicine should be freely used in strong decoction.

The juice of the garden radish, has gained some popularity for its supposed power of dissolving stone in the bladder. The mode of its use is by injection through a catheter.

Injections.—Fourcroy introduced a practice (which has now, however, fallen somewhat into disrepute,) of injecting lithontriptics into the bladder, by means of a catheter and suitable syringe. The agents, in this case, consist of acids and alkalies, soda, saleratus, and the muriatic and nitric acids. They are administered according to the indications above named. The bladder is first to be emptied and then the preparation, about as strong as can be held in the mouth or swallowed, is to be injected in suitable quantities.

Tonics and diet.—These concretions are not formed according to the physiological laws, but are the result of a morbid influence. Whatever, therefore, can be done to tone up and strengthen the system, will be of paramount importance in these cases. Columbo root, peach leaves, poplar bark, &c., are all good, and should be used, especially, in cases attended with much debility. The food and drink, which alone afford the materials constituting these morbid concretions, ought to be selected with reference to this circumstance. People that are troubled with gravelly complaints, should endeavor to dis-

cover in what particulars their food differs from that of others, and in every deviation a change ought to be made.

HEADACHE.

(*Cephalalgia.*)

Pain in the head is seldom found to exist independently of some other derangement of the system. It is a usual attendant of all febrile diseases, foul or disordered condition of the stomach, and constipation of the bowels. Headache is also brought on by over-eating, drinking spirits, colds, intense solar heat, hard study, &c.

When the headache is very severe and protracted, and is attended by sickness at the stomach with vomiting, the affection is called *sick headache*.

Treatment.—The pain will generally yield to the means employed to remove those affections or diseases that give rise to the headache: but when it becomes necessary to do something more directly for the relief of the head, a cloth wet with ether or cold water, should be tied around the forehead, while the feet, after being bathed with the rubefacient wash, must be placed in a pail of water as hot as can be borne. The heat of the water should be kept up by adding boiling water to it, as it may be needed. By these means the head will be relieved from the mechanical pressure of the circulation, and thus ease may be obtained.

Sinapisms applied to the feet and ancles, and left to remain until considerable irritation is produced, will mostly afford relief.

Emetics.—In severe cases, the patient must take a lobelia emetic, as this usually affords prompt relief. This is effected through the remarkable sympathy there is between the stomach and the head. When the headache is caused by over-eating or a foul stomach, an emetic is indispensable.

Stimulating Liniment.—In that variety called nervous headache, the stimulating liniment will generally afford relief; the good effects of the liniment may be promoted by drinking a

tea of the nervine tonic, made a little pungent with cayenne pepper.

Cathartics.—Medicines of this class will generally alleviate the headache, but it is not a good plan to use them much for this purpose, as the relief is obtained at too great a sacrifice. When the pain arises as an effect of constipation, the bowels should be relieved by the use of enemata, instead of cathartics. Nevertheless, it is sometimes the case, that the latter are indicated: when there is much biliary derangement connected with obstinate constipation, two grains of the extract of mandrake should be taken every two hours, until six grains are taken: should it not operate within twelve hours, one or two more doses must be taken.

HEARTBURN.

(*Ardor Ventriculi.*)

The difficulty known by this name, consists of a burning and gnawing pain in the stomach, accompanied with sour eructations and occasional nausea. It depends upon the souring or fermentation of the food in the stomach, and hence is a common symptom of dyspepsia.

Treatment.—Alkalies, such as soda, saleratus, and particularly magnesia, will generally give immediate relief. But these means must be considered only as palliatives; for as the difficulty arises from a debilitated condition of the stomach, permanent relief, can, in reason, only be expected in the use of such means as are calculated to strengthen the stomach and thus promote digestion. Cayenne pepper taken with the food in small quantities, will be found very good for this purpose. The spiced bitters should also be taken, once a day.

Regimen.—The proper treatment of heartburn, consists mostly of negative means. The patient should be careful to avoid the use of all kinds of food that is hard of digestion, and that disagrees with the stomach; he should be very particular not to eat too much at a time, of any kind of food, as this practice is very ruinous to the stomach. The food should always be well masticated, and eaten slowly. Small quanti-

ties of lean animal food, such as beefsteak and mutton, will generally agree with persons troubled with heartburn.

HYSTERICIS.

(*Hysteria*.)

The disease called *hysteria*, chiefly implicates the nervous system, but has received its name from the idea of its arising from an affection of the uterus. Females are most subject to it, but well marked cases are sometimes met with among men.

"The complaint appears under such a variety of shapes, imitates so many other diseases, and is attended with such a variety of symptoms, which denote the animal and vital functions to be considerably disordered, that it is difficult to give a just character or definition of it; and it is only by taking an assemblage of all its appearances, that we can convey a proper idea of it to others. The disease attacks in paroxysms, or fits. These are sometimes preceded by dejection of spirits, anxiety at the stomach, and palpitation at the heart; but it more usually happens, that a pain is felt in the left side, about the flexure of the colon, with a sense of distention advancing upwards, till it gets into the stomach, and removing from thence into the throat; it occasions by its pressure, a sensation as if a ball was lodged there, which by authors has been called *globus hystericus*. The disease having arrived at this height, the patient appears to be threatened with suffocation, becomes faint, and is affected with stupor and insensibility; while, at the same time, the trunk of the body is turned to and fro, the limbs are variously agitated; wild and irregular actions take place in alternate fits of laughter, crying, and screaming; incoherent expressions are uttered, a temporary delirium prevails, and a frothy saliva is discharged from the mouth. The spasms at length abating, a quantity of wind is evacuated upwards, with frequent sighing and sobbing, and the patient recovers the exercise of sense and motion [sometimes.] without any recollection of what has taken place during the fit; feeling, however, a severe pain in the head, and a soreness over the whole body. In some cases, there is little or no convulsive motion, and the person lies seemingly in a state of profound sleep, without either sense or motion. Hic-

cup is a symptom which likewise attends, in some instances, on hysteria; and now and then it happens, that a fit of hysteria consists of this alone. In some cases of this nature, it has been known to continue for two or three days, during which it frequently seems as if it would suffocate the patient, and proceeds gradually weakening the constitution, till it either goes off, or else occasions death by suffocation; but this last is extremely rare. Besides hiccup, other slight spasmodic affections sometimes wholly form a fit of hysteria, which perhaps continue for a day or two, and then either go off of themselves, or are removed by the aid of medicine. In some cases the patient is attacked with violent pains in the back, which extend from the spine to the sternum, and at length become fixed upon the region of the stomach, being evidently of a spasmodic nature, and often prevailing in so high a degree as to cause clammy sweats; a pale cadaverous look, coldness of the extremities, and a pulse hardly perceptible." With these symptoms there is frequently quite a disturbed state of the mind, and extravagant images of various dreadful diseases affecting the body, harass the patient.

Hysteric fits are, however, sometimes mild in their attack, the patient often experiencing only a slight oppression at the stomach, attended with anxiety of mind and a sense of heat in the body.

Persons of weak and nervous habits are most subject to hysteria; and in those, the attacks are excited or brought on, frequently, by sudden emotions of the mind, as by sudden joy, grief, fear, &c. and from this circumstance the poor sufferer is often treated with neglect, and the most uncivil indifference, from the idea that the patient brings on the disease unnecessarily, that is, that it might have been avoided by a proper exercise of the mind. This has associated such an abhorrence with the name, that many are offended to be considered subjects of the disease. There are, however, many cases of hysteria, in which the disease is so intimately associated with a morbid predisposition of the organism, that the strongest mind is insufficient successfully to repel it; nay, when, in addition to this, medicine sometimes fails.

Treatment.—The treatment, in the paroxysm, must be commenced by the use of two or three doses of the anti-spasmodic tincture, which after the spasms are relieved, should be followed up with a strong tea of the nervine tonic.

The following tincture, is an excellent medicine for this complaint.

Take of imported valerian,.....	1 ounce.
Asafœtida,.....	1 do.
Sculcap, ...	$\frac{1}{2}$ do.

Pulverize, and digest in alcohol for ten days, and strain; or for immediate use, the powders may be boiled in alcohol for ten minutes, and strained when it is fit for use.

The dose is from a tea spoonful to a table spoonful. A tea spoonful will do well when the use of the medicine is first commenced, but as the patient becomes accustomed to it, the dose must be increased. This is so excellent a medicine for this complaint, that hysterical patients, when once become accustomed to it, will never be without it.

INDIGESTION.

(*Dyspepsia*.)

Dyspepsia, strictly speaking, is only a symptom of disease, as it only means difficulty of digestion, which is an attendant or effect of nearly all diseases. The stomach, which is the principle organ of digestion, is, as it were, the center of sympathies, and thus may be reached by a great variety of morbid influences. In chronic inflammation of the mucus surface of the stomach and upper part of the intestines, we witness a train of symptoms that come the nearest filling the description generally given of dyspepsia. There is a pain and burning in the stomach, with nausea and occasional vomiting; nidorus eructations; raising of sour food and fluids of a disagreeable acrid taste; heartburn; waterbrash; constipation of the bowels; headache; clamminess of the mouth; foulness of the tongue; flatulency; palpitation; epigastric pulsation; general debility; dizziness, and sometimes fainting; lassitude, and low spirits. The appetite is generally poor, but sometimes voracious. A full meal, and even sometimes a very small one, will lay heavy on the stomach, especially, if the things eaten are hard of digestion, such as warm heavy bread, fat meats, and certain kinds of vegetables.

When the disease extends through the upper part of the intestines, there is generally considerable derangement among the hepatic and biliary organs.

It must be observed that the stomach and bowels, from the

nature of their use, cannot be favored with the protection of an epidermis, as is nearly every other surface of the entire system; but the nerves and vessels, with which these organs are so abundantly supplied, are invested only with a mucous membrane of the most delicate structure. When, in view of this extreme delicacy, it is considered that the human stomach is the devoted receptacle of all that is called for by our depraved appetites, which are only governed by the capriciousness of an imagination stimulated by the corrupt fashions of our day; and what is worse, fashion, by its magic influence, has led us to impose upon our stomachs, services so unnatural and incongruous, as to make of them a kind of portable *apothecary's shop*, or dispensary, where drugs of every kind are kept, even without bottles or envelopes, for distribution; it will then not seem strange that inflammation of the mucous membrane should be of such frequent occurrence.

There can be but little doubt that dyspepsia, in the large majority of cases, is produced by inflammation of the gastro-enteric mucous membrane. Dr. Eberle remarks:* "The worst forms of dyspepsia, and all that host of inveterate gastric and bilious disorders of which so much is heard, and the true nature of which is so often misunderstood, are, in nine cases out of ten, the consequences of a chronic inflammatory condition of the lining membrane of the stomach. The slow and insidious progress of this grade of gastric inflammation during its early period, is indeed well calculated to elude observation, and to lead to a misapprehension of its true character." Dunglison writes to the same import; and Dr. Stokes in his lectures,† speaking of chronic gastritis, makes it the chief cause of dyspepsia; he remarks:—"It [*chronic gastritis*.] is commonly called dyspepsia, and this term, loose and unlimited in its acceptation, often proves a stumbling-block to the student in medicine. Dyspepsia, you know, [*speaking to his class*.] means difficult digestion, a circumstance which may depend on many causes, but perhaps on none more frequently, than upon chronic gastritis."*** "Long continued functional lesion will eventually produce more or less organic disease; and you will find that in most cases of old dyspepsia, there is more or less gastritis. But let us go further, and inquire whether those views are borne out by the ordinary treatment of dyspeptic cases. When you open a book on the practice of physic, and turn to the article dyspepsia, one of the first things which strikes you, is the vast number of cures for indigestion. The more incurable a disease is, and the less we

*Practice, vol. 1, p. 218.

†Stokes and Bell's practice; second edition, vol. 1, p. 125.

know of its treatment, the more numerous is the list of remedies, and the more empirical is its treatment. Now the circumstance of having a great variety of "*cures*" for a disease, is a strong proof, either that there is no real remedy for it, or that its nature is very little understood. A patient afflicted with dyspepsia will generally run through a variety of treatment; he will be ordered bark by one practitioner, mercury by another, purgatives by a third; in fact he will be subjected to every form of treatment. Now all this is proof positive that the disease is not sufficiently understood. What does pathology teach in such cases? In almost every instance where patients have died with symptoms of dyspepsia, pathological anatomy proves the stomach to be in a state of demonstrable disease. It appears, therefore, that whether we look at the uncertainty and vacillations of treatment, or the results of anatomical examinations, the case is still the same; and that, where dyspepsia has been of considerable duration, the chance is, that there is more or less organic disease, and that, if we prescribe for dyspepsia, neglecting this, we are very likely to do mischief."

Whatever may be the extent of the inflammation of the mucous membrane of the stomach and bowels, it will be invariably found to be attended with a corresponding suspension of the function of digestion. When the inflammation runs high, it generally happens that if food be taken, however agreeable in character, it is thrown up immediately from the stomach by vomiting, or it will pass into the bowels and be finally discharged without any signs of digestion. When the inflammation is less active i. e. chronic gastro-enteritis, we have all the varieties of symptoms, and grades of indigestion, from the most distressing dyspepsia, down to the slightest and most transient want of appetite.

Cause.—Although dyspepsia may result from almost any cause of disease, yet as already shown, it is most frequently brought on by the common causes of inflammation of the mucous coat of the stomach; as by excesses in eating and drinking; unwholesome food; intense mental application; sedentary habits, &c.

But one of the most deplorable sources of gastric difficulties is the use of poisonous drugs as medicine, which are now given for the slightest derangements of the system:—a man complaining of uneasiness in the stomach, constipation of the bowels, & headache, applying to a fashionable physician for relief, is informed that his 'liver is out of order,' and the doctor apprehending some slight functional derangement of this organ,

orders a dose of calomel to "regulate its secretions;" the man takes his dose, and finding himself somewhat relieved from the constipation and head-ache, passes on a few weeks, when he returns to his physician, much in the same situation, only that he now complains of slight pain and tenderness in the epigastrium. He now receives another dose of calomel with restrictions as to diet;—passes a few days when he sends for his physician; the doctor finds his patient very uneasy and quite in a feverish state; his tongue dry and covered with a brown fur, encircled with quite a red appearance of its margin; pulse quick and hard; suffers much from thirst, and complains of pain and tenderness of the stomach, and perhaps his right side. The doctor still apprehensive that all is not right with the liver, and not much liking the inflammatory appearances, bleeds him, and leaves him some 8 or 10 portions of calomel with opium; from 3 to 5 grains each of the former, to be taken once in two hours. On his return, the doctor finds that his medicine has not operated, and that his patient is much worse in every respect; he now leaves him, perhaps, some three large doses of calomel and jallap, and orders them to be followed with large doses of oil. On the following visit the symptoms are found still more unfavorable; the patient suffers intense pain in the stomach and bowels, and is very much harrassed with retching and vomiting, attended with a sense of weight in the stomach; the fever is very high, the tongue furred, and the thirst intolerable. The doctor is now led by the gastric irritation to examine the case more closely, and becomes satisfied that this is without doubt a well marked case of *gastro-enteritis*, and at once adopts a more active antiplogistic plan of treatment; takes away perhaps twenty ounces of blood from the arm, and applies some twelve or fifteen leeches to the epigastrium. Per stomach, little medicine is now recommended; ice, and a little orange juice diluted in water, and, perhaps, a little barley water, is all that is ordered, and food of every kind is prohibited for the present. After the leeches drop off, the doctor, just before leaving, perhaps, rubs on the region of the stomach some 8 or 10 drops of croton oil. On his next visit he finds his patient not any better, for although the fever is somewhat abated, yet the soreness of the stomach is very considerable, and the pain is also yet quite severe; the pulse is rather quick and tremulous.—The doctor applies a large blister to the epigastrium, and leaves a plaster of mercurial ointment to be applied to the same after the removal of the blister; orders an infusion of slippery elm bark and takes his leave.

On the following morning the doctor discovers that in addi-

tion to former difficulties, the flies in his blister have produced a severe strangury. The pulse now, although somewhat influenced by the flies and mercury, manifestly indicates an approaching *typhus*. The strong apprehensions, however, that the doctor has had with regard to the height and obstinacy of the fever, has made him look with much anxiety for a change, and the pulse now being lower, and the pain of the stomach, (owing to the sympathy of this organ with that great external irritation produced by the blister, and mercurial ointment,) seemingly less severe, he hails the present symptoms as being indicative of a better state of things. There is now however but little medicine ordered, but the strictest injunctions are given with regard to diet; and the nurse is assured that the slightest deviations from orders, would certainly be attended with fatal consequences. On the next visit, the doctor finds his patient sunk into a low typhus. The nurse, the interference of friends, or something else, will bear the blame; or the entire evil may be referred to an ill fate, or over-ruling providence. The doctor now condemns the case, and leaves his unfortunate victim alone to suffer and die.

The patient being now deserted by his physician, the cause of his misery, begins in a few days to improve. The vital powers now left free to act, rapidly re-assume their wanted tone, and promise soon, in despite of the physicians predictions, to restore comparative health. But the patient no sooner gives signs of improvement than the *friends* of the sick, now once more encouraged, quickly send for the doctor, hoping that by taking advantage of this improvement that the patient may possibly get well at last. The doctor comes; remarks that the medicine has had its desired effect; that the patient is getting better, and that by taking a little more medicine would soon be well. The patient takes his medicine and gets worse; the doctor once more leaves him to die. The vital powers being now so far exhausted make it doubtful whether he will live or die, but if he is now left without any more poisonous drugs he may possibly recover a comparative degree of health, but will ever be troubled more or less with dyspepsia.

Now that the above is a true sample of thousands of cases that do occur, who will dare to deny? How sad to tell then, that aside from all the hurtful influences brought upon community by corrupt habits and depraved appetites, *medicine*, the reputed source of our remedy, is found one of the most fruitful causes of our misery.

Treatment.—The first thing to be done in the cure of dys-

pepsia, is to discover if possible, by what irregularity of habit, or circumstances of exposure, the difficulty is brought on, and then remove at once, if practicable, the cause or causes of the disease.

The second indication, is to cleanse the system; and here it is to be observed, that to operate on the stomach alone is not sufficient, although the primary affection may be here, for when the disease is once established in the stomach, the functions of all the other organs will be more or less impaired. We find that there is not only want of action in the stomach, but that the bowels move slowly, or at least very irregularly,—that chylific absorption, and the circulation is very languid; nor are the excretions more rapid. Obstructions so universal, need a general process of cleansing. For this purpose, a course of *emetics, baths, frictions, and enemas*, is most eminently adapted.

This part of the treatment, if the case be difficult, should be commenced, first by the use of the *diaphoretic powders* for a few hours, while the preparations for a bath are progressing. As soon as the skin becomes moist, a *lobelia emetic* should be administered, and sustained during its operation, by stimulants, relaxents, astringents, or alkalies, as the case may require. When the emetic is done operating, the patient, after eating a little of some appropriate food, should be well rubbed with a towel wrung out of cold water, and have an enema, composed of a strong decoction of thoroughwort and poplar bark, or of the laxative bitter tonic, with a small portion of cayenne pepper, or of the compound tincture of myrrh.

This course should be practiced every second, third, or fourth day, according to the urgency of the symptoms, using laxatives, diaphoretics, tonics, and rubefacients, in the intervals, until the disease is broken up. in less obstinate cases, the several parts of this course, may be used separately or alone, and repeated as occasion may require; observing also the plan of using an appropriate intermediate treatment.

As soon as the disease is found to yield, the use of tonics should be instituted; for this purpose the *cascarilla* is an excellent article, but if this is not at hand, any of the restorative preparations recommended in Pharmacy, or the simple tonics in Materia Medica, will answer very well.

During the course of the treatment, the various incidental and local symptoms should have appropriate attention; thus the acidity of the stomach may be obviated by the use of a little carbonate of soda or sub. carbonate of potassa (*saleratus*.) Colic pains may be relieved by carminatives, stimulants,

and anodynes. Fine charcoal, taken in table spoonful doses several times a day is very good, not only to keep the bowels open, but to prevent acidity of the stomach: it may be prepared by scalding it in milk.

Cayenne pepper.—Pepper is an excellent article in dyspepsia, and should be used, in half tea spoonful doses three times a day, or oftener. This medicine is a pure excitant, and will stimulate the living organs to the performance of their natural functions. Made into pills with equal parts of beef's gall, dried sufficient to form into pills, and taken in the dose of one good sized pill every evening, will not only be of eminent service to the stomach but will keep the bowels regular.

INFLAMMATION.

(*Inflammatio*.)

The term inflammation comes from *in* 'within,' and *flamma* 'flame,' 'fire,' signifying ignition or the act of burning. This diathesis has, therefore, inherited this name from the heat and redness that are such prominent attendants; and, there is, indeed, more propriety in giving it this name, than is generally apprehended by the pathologists of our day, as some of the attending symptoms are immediate results of the union of oxygen with certain combustible materials in the parts.

The same principles that give rise to the heat and excitement in fever, occasion their existence here.

The philosophy of this theory of animal heat, or its morbid increase as evinced in fever and inflammation, is well illustrated by chemical experiments: sulphuric acid, composed of one proportion of sulphur and three of oxygen, and protoxide of hydrogen (water,) which is composed of one proportion of oxygen and one of hydrogen, when united in certain proportions, will raise the temperature to three hundred degrees Fahrenheit. A temperature high enough to boil eggs, can be produced, simply, by throwing some water on the oxide of calcium (*quick lime*.) The increased heat in these cases, is produced on the principle of converting bodies from a rarer to a denser state, thereby making heat sensible, that before existed in a latent state.

The principle characteristics of inflammation are *calor*, *ru-*

bor, dolor, et tumor, that is, *heat, redness, pain and swelling*. In the developement of these symptoms, the following catenation of events are found to occur: first, on the application of the morbid agency, (which may be caused by the infliction of a bruise, cut, bite, sting, burn, the effects of cold, or any other destructive power,) the contact no sooner takes place, than by the natural laws of sensation and irritability, the impression is communicated by the nerves to the brain. In the second place, the brain which superintends the circulation, responds to the call of the injured parts, by sending an increased volume of blood, in order to sustain or restore them. Now it may be remarked in the third place, that the process of the reparation, as well as that of the defence of any part, is essentially an inflammatory one,* and that this increased volume of blood sent to the part, (possessing all the elements of combustion,) is fully equal to the support of a combustion corresponding with the increase of the temperature of the inflamed part.

This theory well explains the above named symptoms of inflammation; the redness arises from the presence of the increased quantity of blood that now (from the relaxed condition of the parts,) passes even into the finest capillaries, which in the healthy condition contain only white fluids. The source of the heat has already been explained: but the swelling or tumefaction, it may be observed, arises from the effusion of serum, which, from the relaxation caused by the high temperature, readily passes into the vascular tissues. As to the pain, we find a sufficient cause for its rise, in the displacement and compression of the nerves, caused by the swelling, and even the effects of the oxygen itself on these delicate tissues.

Inflammation a sanative process.—By what has already been said on this subject, it will be seen that inflammation is not necessarily a morbid process. It has been shown elsewhere, that combustion with which this phenomenon is identical, is necessary to the physiological condition,—that the process of nutrition assimilation &c., are dependent on it; and it may not be improper here to show that lymphization, granulation, cicatrization, and indeed every other restorative process is as certainly dependent upon it. The mischiefs attending this phenomenon, are not found in the essential character of the

*The temperature called animal heat, as explained in the article on fever, is produced by the interchange of the materials of elementary compounds in the process of nutrition and assimilation, and we witness no healing or restorative process in which an increased amount of heat corresponding with the addition of the effective force that is brought to bear, is not evinced.

inflammation, but we discover them to be the legitimate results of the primary morbid agencies that have diminished the vitality of the parts, and thus made combustion, otherwise a necessary and physiological function, to assume abnormal aspects. Thus while inflammation is not only a common attendant of all local injuries, but may by its degrees of violence serve to point out the danger there is in the case, it must at the same time be regarded as a sanative agent, for no restorative process, can be either instituted or carried on without its agency.

Our surgeons now well know the importance of this natural process; they are well aware that all that is effected in surgery, by what is called "*first intention*," is the result of inflammation. The healing of wounds; the restoration of fractures, and the cure of bruises or contusions, are all alike dependent on its supervention. By its agency, extraneous substances are removed from every part of the body. Of this we have a very good example in the removal of pus from the liver. This may be effected by ulceration through the parietes and thus be discharged externally, or the parts may contract adhesions with the intestines, perforate them by ulceration, and the matter may in this way be removed; or the liver may form adhesions with the pulmonary organs through the medium of the diaphragm, and by ulceration, the matter may penetrate the bronchia, and thus be removed by expectoration. Again, when the location of the pus, is in such a part as renders either of these modes of escape impracticable, we find that a *cist* will be formed around the matter, so as to protect the parts, when the pus will be taken up and carried into the circulation, and thus be ultimately removed by the cutaneous exhalents. Finally, we find that when a solid substance, is forced into the soft parts, as for instance, the intrusion of a splinter or thorn, the surrounding parts will soon take on inflammation, and ulcerate, and thus carry off the substance in a flood of pus. On this subject Dr. Marshall Hall remarks as follows:—

"Some of the provisions of Nature,—or rather of the Creator of all things,—accomplished through the medium of the action and processes of inflammation, are quite wonderful. An abscess may form in the liver; the pus may be expectorated through the bronchial tubes; and the patient may survive. An intestine may be strangulated by being intussuscepted into another portion of intestine; it may separate and pass per anum, leaving the original canal free and entire; and this patient, like the former one, may survive. If we experiment on a dog, draw out a portion of the small intestine, and tie a lig-

ature firmly around it, so as entirely to obstruct its course, the adjacent portions of the intestine re-unite, the ligature is separated into its canal, this canal itself remains pervious as before, and the animal survives the dangers of this fearful operation."

Terminations.—Among the most common terminations of inflammation are, *resolution*, *effusion*, *suppuration*, *induration*, and *gangrene*.

Resolution.—When the inflammatory action gradually abates, and its cause finally becomes suspended or subdued by the vital force, and thus the parts reassume their normal condition, without the supervention of suppuration, induration, &c. the inflammation is said to terminate in resolution.

Effusion.—When the swelling assumes an œdematic (*doughy*.) character, and seems to incline toward the more dependent parts of the organs affected; and if moreover the pain is less considerable, and the redness incline to more of a pale or yellowish appearance, we may conclude that more or less effusion is going on. The matter effused is generally *serum*, and *lymph*. Serum is frequently thrown, and sometimes in great abundance, on serous surfaces of the organs, that is, on the *lungs*, *pleura*, *diaphragm*, &c. The cellular tissues are sometimes made to receive large quantities of serum; of which we have an example in dropsy. Lymph, is also thrown out on inflamed serous surfaces, which is apt to coagulate, and thus often forms a union of contiguous surfaces. It is the effusion of lymph into lacerated wounds, that causes them to heal up. The matter effused in inflammation separates from the blood and the substance of the organs, by the collateral agency of oxygen with the *vis conservatrix*.

Suppuration.—This is a very common termination of inflammation. The general premonitories, if the action be extensive, are *chills*, *rigors*, and *anxiety*. The local symptoms are a sense of a dull heavy weight in the affected part, attended with more lancinating pains and with a circumscribed appearance of the redness and swelling. In the centre of the swelling, if it be in the outer parts, may now be discovered a point more elevated and soft to the touch, where the pus is collected. The integuments now also become more and more thin, and assume a whitish or yellowish color, and at length loose their firmness, and give vent to the pus. The pus is, however, not always found in a collected form, for in some tissues

it may lack the cyst formation, and hence it may become *infiltrated* through the neighboring cellular portions. Infiltration is very common in the lungs, where abscesses are comparatively rare. Suppuration may also be *diffused*; thus it, sometimes, covers large surfaces, as that of the *archnoid*, the *pleura*, the *pericardium*, the *peritoneum*, &c.

Induration.—The parts often increase in consistence or grow hard, as the inflammation subsides. This termination may occur in any tissue of the body, but is by far the most common among the glandular parts, especially in the *spleen*, the *liver*, the *lymphatic ganglions*, and *subcutaneous cellular substance*.

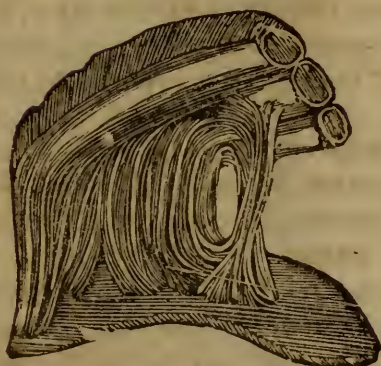
Gangrene.—In very violent cases of inflammation, in which the vitality of the part is much diminished, the inflammatory action may end in the death or mortification of so much of the part as the conservative powers are not able successfully to defend.

The general symptoms which foretell the approach of gangrene, are a collapsed state of the system, paleness, a cold clammy sweat, sunken features, a peculiar cadaveric look, tremor, and a feeble threadlike pulse. The part affected assumes a livid or purpleish hue; its tension and elasticity diminish and yield to a doughy state, like a cyst containing thick fluids. The symptoms that give evidence of the immediate approach of *sphacelus*, are a loss of sensibility and heat, and a discoloration of the part.

Inflammation modified by textures.—The character and terminations of inflammation, are much modified by the character or kind of texture on which it spends its influence.

Inflammation of the *serous* membranes, is characterized by effusion first of *serum*, and afterwards of coagulable *lymph* and *albumino-febrine*, which is sometimes considerably mixed with blood. Adhesions are apt to form in cases of inflammation of these membranes; and thus it happens that the *pleura* is so often found attached to the surface of the ribs, and lungs.

The following cut from Baillie, well illustrates these adhesions.



Inflammations of the serous membranes seldom end in ulceration.

In inflammation of the *mucous* membranes the reverse obtains. In this case the effusion consists of mucous, which is at first considerably transparent, but afterwards becomes more opaque and puriform.* In some instances the mucous is tinged or even deeply stained with blood, as is evinced in *bronchitis*, and pretty generally in *dysentery* or *bloody flux*.

It is rarely the case that we observe the exudation of coagulable *lymph*, in inflammations of this texture. Nevertheless, it occurs, sometimes, as seen in cases of *cynanche treachealis* or *croup*, and in extreme cases, in the bowels and vagina, in which it is called *false-membrane*.†

This disposition of the textures, is a very happy and important circumstance, for if the reverse should occur,—if the mucous surfaces should exude coagulable lymph, and the serous surfaces mucous, or pus, we would find that in inflammations of the *œsophagus*, bowels, *urethra*, *vagina*, &c., that they would contract adhesions and close up their passages, while the *pleura*, *pericardium*, *peritoneum*, &c. would be subject, on the occurrence of inflammation, to ulcerations, and thus be attended with consequences almost certain to prove immediately fatal.

It seems that when inflammations implicate parts constituted of various textures, that these, severally, evince their common characteristics. Thus the mucous textures throw out

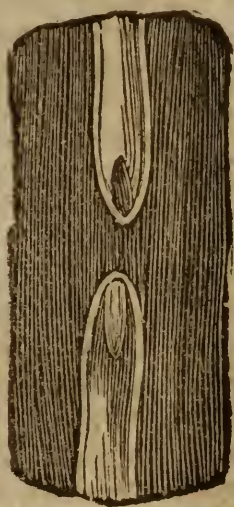
*When the inflammation subsides or the mucous becomes more cool, it re-assumes its transparency.

†This is what Dr. S. Thomson, denominated canker.

mucous and pus, while the serous in turn line their surfaces with lymph and serum. Accordingly we find that in typhoid fever, in cases even of perforations, that while the internal surface is sloughing off, the outside is contracting adhesions to contiguous surfaces, forming, in this way, a protection to the abdominal cavity against extravasation, which would necessarily prove fatal by the violent peritoneal inflammation that it would occasion.

The *parenchymatous substance* of organs, is apt to be softened by acute, and indurated by chronic inflammations. Softening, induration, and abscess, are frequently seen in the brain; abscess in the liver; gangrene in the lungs.—(*Hall.*)

The *arteries* are not much disposed to inflammation from injuries; when they are wounded, the margins of the wound may take on inflammation, a coagulum form, and the wound heal. When an artery is divided, the ends will contract, and a *stopper-like* clot of blood form in each; adhesive inflammation, now closes up the artery, as represented in the following cut, which is given by Dr. Jones, and is designed to illustrate the *femoral* artery of a dog, nine days after it was divided.



It will be seen that the ends are considerably retracted, as well as contracted, and that the coagulum is neatly healed into the ends or stumps of the vessel, and assuming a firm texture like the artery itself, is sufficient to resist the force of the circulation, and thus prevent the hemorrhage that would otherwise take place and thus immediately destroy the subject.

The circulation is now sustained, through these parts, by the anastomosis of their branches, as represented below. By this



cut it is designed to illustrate a large artery to which a ligature was applied.

The *veins* manifest a disposition different from the arteries. In the veins we observe diffused effusion of albumino-fibrine, but adhesive inflammation is not so likely to occur. When a vein is divided, we do not find the same readiness of the vessels to heal up. It is true, that coagulable lymph may be thrown out by the surrounding textures, but the ulcerative process, is most likely to occur. Diffusive phlebitis is by no means an uncommon occurrence, and this may run along the vein even to the heart, and thus prove speedily fatal. It is very common to observe mischiefs of no small magnitude to follow even the small puncture of the lancet, in the practice of blood-letting. If there were no more disposition to heal, in the arteries than there is found in the veins, we might expect fatal hemorrhages universally to accompany wounds or ruptures of these vessels, for although ligatures might be applied, the parts not healing,* would, in many instances, rot away and renew the difficulty.

Inflammation of the *lymphatic* vessels, is, like phlebitis, apt to be diffused. The morbid action extends along their course towards the thoracic duct and the heart, and would probably prove as fatal in its results as phlebitis, if it did not meet with a barrier in the glands of the system, situated in the neck, the axilla, the groin, &c. These glands guard the inlets into the great cavities; they frequently suppurate; and what havoc would ensue, were they *within*, instead of being *without*,

*It is true, that veins that are tied, do heal up, many times, yet all surgeons know how difficult the process is.

—Poupart's ligament for example. Inflammation of the absorbents generally terminates by resolution. In one instance, however, it passed on to suppuration, and many abscesses formed in the course of the lymphatic vessels, as they ascended from the heel (which was the seat of ulcer from chilblain, the cause of the inflammation) upwards along the thigh.—(Hall.)

Ulceration of the *lymphatic glands* frequently occurs from the morbid accumulations which arise from ulcers, &c., in the parts beyond, and are carried by the lymphatic vessels into these glands. The glands of the neck, axilla, and groin are often found thus affected.

As to the *fibrous tissues, tendon* may slough,—*cartilage and ligament* ulcerate, but they as well as the *muscles* are more apt to end their inflammations in the exudation of serum and gelatinous fluids, or the deposition of earthy matter. But by far the most frequent termination in these tissues is by resolution.

Inflammation of the *osseous* tissue, is apt to terminate in necrosis, and caries.*

Finally, we find in the terminations of inflammation in the cutaneous tissues, the evidences of a mixture of textures.—The ulcerations occurring here are very analagous to those of the mucous linings of the intestinal canals. Erysipelas exhibits an imperfect developement of suppuration, sloughing and gangrene.

In the variolous pustule, we have an example of the various phenomena that attend inflammation of this structure. In the first place, a sebaceous gland will manifest the usual symptoms of inflammation, that is, redness, tumor, &c.; on the third or fourth day, we have the effusion of *serum*, in a vesicle with its center tied down by the duct of the gland; on the fifth day, we observe the deposition of *pus* around this central point; on the seventh or eighth day, the serum is entirely replaced by pus; and probably on the ninth, the central duct has been absorbed or has sloughed away, and the pustule assumes an orbicular form. Effusion of lymph may also be observed, which occurrence is evidenced by the cicatrix that marks the part after healing. It will be observed moreover during the process of the inflammation, that sloughing of the cutis vera occurs about the time that the pustule is in its maturity.

*Caries may be considered to correspond to ulceration, and necrosis to mortification.

INFLAMMATION OF THE BLADDER.

(Cystitis.)

This affection is of rare occurrence, and when it does take place, it is generally the result of injuries to the part. It may however, arise from the irritation of a calculus or stone in the bladder, from suppression of urine, the use of cantharides or Spanish flies, &c.

Symptoms.—Tension or hardness, tenesmus, fever, hard pulse, and pain in the parts, frequent desire to urinate with difficulty to void it; or sometimes a total suppression of urine, are among the most prominent symptoms of this disease.

Treatment.—Enemas of the infusion of lobelia and thoroughwort, frequently administered, together with the use of the rubefacient oil or wash, over the region of the bladder, and the usual means of equalizing the circulation will generally be all that is required.

When there is suppression of the urine, it may be necessary to draw it off by means of a catheter.

In very severe cases, the water should be drawn off, and leaving the catheter remain, an infusion, made by scalding a tea spoonful of lobelia in a pint of thick slippery elm tea, stirring it till it cools, and then straining through a cloth, should be injected (once in a few hours, in portions of a tea-cupful,) into the bladder through the catheter, by means of a syringe having a point that will enter the catheter. This application with the other part of the treatment, will generally give relief with considerable promptness, even in the worst of cases. Cold water injected into the bladder in this way, when the inflammation runs very high, will sometimes be serviceable.

INFLAMMATION OF THE BOWELS.

(Enteritis.)

Inflammation of the bowels manifests itself by pain in the abdomen, particularly in the umbilical region, which is ac-

accompanied with eructations, sickness at the stomach, a vomiting of bilious matter, obstinate costiveness, thirst, heat, great anxiety, and a quick and hard pulse. As the disease progresses, the pain grows more severe, the bowels seem spasmodically drawn together, and the abdomen becomes tightly distended, and very painful to pressure; the constipation becomes more distressing; and the urine scanty or completely obstructed.

Dissections, in this disease, show that when these symptoms appear, the diseased action chiefly implicates the external or peritoneal coats of the intestines; and that when the inner or mucous coat is principally effected, the usual symptoms of dysentery prevail.

The affection sometimes involves only a small portion of the intestinal tube, but more generally pervades a very considerable extent.

The inflammation commonly terminates by resolution, but effusion and adhesion to contiguous parts, sometimes, occur; or ulcerations may take place, or gangrene set in.

Treatment.—In the treatment of this severe, and frequently dangerous affection, the main object should be to equalize the circulation, and direct the determining powers to the surface. For this purpose, no means is better adapted than the vapor bath, which should be applied alternately with the rubefacient wash or bathing drops. The next object should be to open the bowels; which must be effected with the use of appropriate medicines by means of injection. For this purpose the following is very good:

Take of Gum Arabic, or slippery elm powder.....	½ ounce.
“ Mandrake extract, (<i>soft</i> .).....	1 drachm.
“ Lobelia, (<i>fine</i> .).....	1 do.

Put the ingredients into a pint of cold water, and agitate it well with a spoon. This should be used at one injection, and a like portion administered every hour, until the bowels evacuate. Should the inflammatory symptoms run very high, cold water, by injection, will sometimes be found very useful.

The stomach, in this complaint, is usually very irritable, and hence, generally, requires attention. An infusion of spearmint, or peppermint, may be used to obviate the irritability, and should this prove unsuccessful, a handful of the mint herb, may be scalded and applied to the stomach externally, or the oil may be applied in its stead.

Emetics.—Lobelia emetics, besides their beneficial effects in cleansing the stomach, are eminently serviceable for their relaxing powers, and tendency to equalize the circulation.

Diaphoretics.—A free perspiration should be kept up, but this should be done, as much as possible, by external means; as by keeping a steaming stone to the feet, the use of the vapor bath and the rubefacients. The milder diaphoretics, such as the white root, and pennyroyal, may however be used in the form of a tea.

Cathartics.—In this disease, cathartics are not advisable, because of the irritation that they are apt to excite in the bowels. It may, however, be proper, sometimes, to use a dose of olive, almond, or castor oil, as they are emollient, and less irritating than cathartics in general.

Fomentations.—Fomentations of hops, camomile, and rue, with a few pepper pods, stewed in vinegar and applied to the bowels externally, are, sometimes, of signal service.

Slippery elm water, or the mucilage of gum arabic, should be drank pretty freely, with a view to their emollient effects on the bowels.

INFLAMMATION OF THE BRAIN.

(*Phrenitis.*)

Phrenzy, as the disease is sometimes called, is characterized by a considerable fever, violent headache, redness of the face and eyes, intolerance of light and noise, watchfulness, and delirium.

The disease comes on with a sense of fulness and heat in the head, flushing of the countenance, redness of the eyes, and a full pulse. The stomach and bowels soon become disturbed with sympathy, and hence there is, sometimes, more or less vomiting, and pain in the bowels. The pain in the head, is not always severe; when the morbid action affects the substance of the brain alone, there is seldom much pain, as this tissue is not very sensitive, but when the meninges or membranes are implicated, which is generally the case, the pain is distressing.

As the disease advances, the fever increases, and the delirium sets in; the patient looks wildly, talks incoherently, grinds his teeth, and becomes very restless. At the highest stage of the disease, the headache, sometimes, becomes intolerable, and the delirium rises to a raving pitch.

Treatment.—In the treatment of this violent affection, no time should be lost in applying the most prompt means. The first object should be to equalize the circulation; and for this purpose, enemas made of thoroughwort tea, containing a tea spoonful of cayenne pepper and as much lobelia in each, must be immediately administered, and continued on at suitable intervals until relief is obtained. Mustard plasters, or at least a hot steaming stone, should be applied to the feet. The patient must be kept sick with nauseating doses of lobelia; but until the pressure to the head is relieved, it should not be pushed so far as to produce vomiting. The head is sometimes promptly relieved by the operation of a cathartic, and for this purpose, Beache's common cathartic powder may be used. The surface must now be well bathed with either the bathing drops, or rubefacient solution.

Local means.—Cloths wet with ether or cold water, must be constantly kept about the head, and renewed as often as they get warm or dry. If this treatment is persevered in, it will generally prove successful.

INFLAMMATION OF THE EYES.

(*Ophthalmia.*)

Inflammation of the eyes may be confined to the lids and external membranes of the eyes, or it may also implicate even the whole globe.

The symptoms in this affection, are redness of the eyes, with pain and heat over its surface, and soreness of the lids: there is also generally a profuse effusion of tears, and an intolerance of light.

Cause.—Exposure to wind or dust, working before a very hot fire, the intrusion of extraneous substances, excessive weeping or crying, cold, external violence, eruptive diseases, sy-

philitis, &c., are among the most common causes of this complaint.

Treatment.—Those valuable eye-waters, recommended in the back part of the book, if perseveringly used, will generally cure sore eyes without any additional treatment; but when these seem ineffectual, and, especially, when the inflammation runs high, a good cathartic may be taken, and the eyes well washed first with a weak infusion of lobelia, and afterwards with clean cold water, while in addition to this, either of the eye-waters here recommended, is used two or three times a day. Astringent washes are sometimes indicated, and again it may become necessary to poultice the eyes: for this purpose, the astringent tonic, and slippery elm or lynn bark may be used, or the elm with a little lobelia, as the nature of the case may require.

INFLAMMATION OF THE KIDNEYS.

(*Nephritis.*)

Symptoms.—Acute pain in the region of the kidneys, extending downwards along the course of the ureters, a frequent desire to pass urine attended with difficulty in voiding it, a hot skin and constipation of the bowels, are the principle symptoms. If only one of the kidneys is effected the patient will have a disposition to lie mostly on the side affected.

Treatment.—Diaphoretics, relaxants, and such other means as are calculated to equalize the circulation and direct the determining powers to the surface, are indicated in this disease. Enemas of thoroughwort with a small portion of lobelia and the extract of mandrake (3 to 5 grains,) should be administered, not only with a view of keeping the bowels open, but in order, by those means, to control the diseased action in the kidneys.

Rubefacients.—The rubefacient oil or stimulating liniment, should be applied to the small of the back with friction, and after this, a steaming stone should be laid against the part, the patient being in bed.

Diuretics.—Queen of the meadow, or the Indian hemp, must be used, in strong infusion, and continued until it produces a sensible diuretic effect, and then be followed with a decoction or infusion, of dried peach leaves till health is restored.

INFLAMMATION OF THE LIVER.

(*Hepatitis.*)

Authors, in treating this affection, generally, regard it as consisting of two varieties, the *acute* and the *chronic*.

The acute variety, comes on with a pain in the right side, usually extending up to the shoulder, which is much increased by pressure on the parts. The tongue is mostly coated; and there is often nausea and sickness at the stomach, with an occasional vomiting of bilious matter. The urine is deeply stained with bile, and the eyes and skin are also of a yellowish color. The patient, usually, inclines to lay on his right or affected side. There is, generally, considerable fever, especially, if the attack is severe.

In the chronic variety, the same symptoms are generally, present, but are not so prominently marked. The patient will, perhaps, go about complaining more or less of pain in his side, want of appetite, indigestion, flatulency, and feverish state of the body.

The pain in either variety, though sometimes quite acute, is more usually of an obtuse or dull character; indeed the disease, owing to the absence of pain, often progresses considerably before it is detected. Instances have occurred, in which no hepatic derangement was at all suspected, and yet by examination after death, it was found that the liver was very extensively ulcerated.

In this affection, especially, in the chronic variety, tubercles in the liver are of very frequent occurrence. These are sometimes of considerable size, but more generally, they are small and many in number.

The liver when in an inflammatory condition, sometimes varies very much in its color; the writer saw one in the Hospital at Cincinnati, that was taken from a patient that died in the wards, the color of which, was such as could not be distinguished from that of the lungs. Besides the change of col-

or, the inflamed liver often changes its size very considerably, as it sometimes becomes enormously swelled.

Treatment.—Liver affections are sometimes very difficult to cure, for, as above stated, the diseased habit generally becomes much confirmed before it is detected; but by the use of proper means, and perseverance, this affection may, generally be cured as well as others.

Emetics.—In the treatment of liver affections, emetics render important service, in relaxing the diseased organ, and stimulating it to a healthy action. Their power in equalizing the circulation, is also as efficient as any other agency in the resources of our materia medica. The mechanical pressure and agitation of the liver, during the operation of emetics, is also very beneficial. In this complaint, as well as in most others, the lobelia inflata is entirely the best article in this class. It should be administered in small but frequent doses, so as to keep up a continued nausea, for several hours, when the doses must be increased so as to produce active emesis. The vapor bath is eminently calculated to promote the good effects of the lobelia, and will also do much to equalize the circulation, and to remove the bilious obstruction in the circulatory system.

Cathartics.—After the system is well relaxed, a dose of the extract of mandrake* must be given, and until the operation of this, a flesh-brush or coarse towel should be used freely, and be followed with the application of rubefacients or stimulating washes. Should the symptoms not yield to the operation of one dose of the mandrake, the medicine should be continued in broken doses, so as to keep up an action in the bowels for several days. In the mean time, the system should be supported with the use of stimulants, tonics, and nourishing broths.

Local means.—After the parts are briskly rubbed with the dry hand, the irritating plaster should be applied to the right hypochondriac region, or directly over the painful or diseased part. This should be left to remain for a number of days, or until its effects are developed.

When the plaster is not at hand, the stimulating liniment or rubefacient oil, must be used once or twice a day until the plaster can be procured.

*When this is not at hand, the powdered root, with a small portion of cayenne pepper, may be used in its stead.

Tonics.—Medicines of this class, are important during convalescence. The cascarilla, yellow root, columbo, or poplar bark, may be used once or twice a day, either in the form of a syrup, or powder.

INFLAMMATION OF THE LUNGS.

(*Pneumonia.*)

By inflammation of the lungs or pneumonia, the inflammatory condition of several of the organs of the chest are, sometimes, known by practitioners.* Authors, however, usually treat these under separate heads. When the inflammatory action chiefly involves the *bronchial tubes*, it is called *bronchitis*; and when the substance or surface of the *lungs*, *Peripneumonia*.

BRONCHITIS.—"The symptoms vary very materially, but in every case there is cough, differing, however, in its character and intensity, but always more marked, perhaps, than in other diseases of the respiratory organs. The expectoration, too, differs greatly. At times, it is clear and transparent; at others, very frothy; or, on the other hand, viscid, adhesive, and containing small white grains, which adhere to the vessel. These particles have been mistaken for portions of pulmonary tubercle, and, therefore, have been supposed to be indicative of phthisis; but if there be any doubt as to their nature and origin, the doubt may be dissolved by placing some of them on a piece of paper, and exposing them to heat. If they are merely sebaceous matter from the mucous follicles of the fauces and pharynx, they will leave on the paper a greasy stain, which will not be the case, provided they are tubercular matter from the lungs. In other cases, the sputa consists of a greenish yellow puriform mucus, which may either form a homogeneous mass, or the matter of each expectoration may remain distinct. Commonly they are devoid of smell, but, at times, they are insupportably foetid. * * *

"The respiration may not be much affected; but, commonly, it is more or less oppressed, and, at times, seems to be complicated, as it were, with asthma—the difficulty of breathing

*Pleuritis or inflammation of the pleura, is frequently confounded with pneumonia.

recurring in paroxysms. Commonly, there is not much pain attendant upon it, unless the paroxysms of coughing are frequent, and severe. Nor are the general symptoms usually marked. At times there is no accompanying fever; but, in other cases, the febrile movement is considerable; the inflammatory affection passing to the subacute form. When this is the case, the nutrition of the system is affected; emaciation takes place, with evident febrile exacerbations towards evening, and all the signs of hectic, under which the individual is gradually worn away.”—(*Dunglison*.)

The affection is, however, not always so severe: in some cases there are only some slight inconveniences of cough, attended with an expectoration of tough mucus; and perhaps a pain or sense of soreness in the upper part of the chest, which is increased by taking full respirations.

PERIPNEUMONIA.—This variety of pulmonary affections comes on with lassitude, dullness, chills alternated with flushes of heat. In a day or two, and sometimes sooner, a considerable fever comes on; the breathing becomes much oppressed, especially, when the patient is in a horizontal position; a pain (which is sometimes acute, but more generally rather of an obtuse character,) is felt in the chest. There is a cough, which, though dry at first, is attended, in the course of a few days, with a copious expectoration of viscid phlegm, sometimes, mixed more or less with blood. The skin is hot and dry; the pulse frequent, full, obstructed, but not generally very hard; and in the advanced stage of the disease, it usually becomes quite weak, irregular, and labored. The urine is high colored, and is discharged in small quantities.

Inflammation of the lungs, generally terminates in resolution, but may be followed by suppuration, or even gangrene; the last, however, is of rare occurrence.

Treatment.—The treatment of bronchitis and peripneumonia or real inflammation of the lungs, is very much the same. The first thing to be done, is to relax the system freely, and restore the functions of the skin; for as the disease is most generally brought on by exposure to cold or wet, the skin is always contracted, and its excretions consequently very much or completely obstructed. With a view to effect this, lobelia should be used in broken doses for several hours, while other means that are calculated to promote perspiration are promptly attended to. As soon as the patient is brought into a state of moisture, the doses of the lobelia must be increased so as to procure free emesis.

The patient should now be kept in a moist state by using, alternately, the sudorific powders, and a tea of the white root; or in stead of these, any other prompt articles of the kind that are more pleasant to the taste, may be used in their stead, bearing in mind, however, that the great object is to keep the system relaxed and the skin moist.

Vapor Bath.—In very severe and threatening cases of the disease, the vapor bath is indispensable to a quick and safe recovery. It is best to use it immediately before the operation of the emetic. The relief that is obtained in lung affections, by this means, is astonishing to all that are unacquainted with the therapeutic effects of the hot aqueous vapor.—All the benefits usually expected from blood-letting may be secured by the vapor bath and that without any sacrifice.

Expectorants.—As soon as the cough commences fairly, expectorants become necessary to facilitate the removal of the matter accumulating at the lungs.* Either of the formulas of this class, found among the compounds, is very good in this complaint: but perhaps the better plan of procedure in these cases, is to use the expectorant powders, in tea spoonful doses, or in doses as large as the stomach will bear, three times a day, until the expectoration becomes free (using some lobelia tea, sweetened, should the powder not prove to act with sufficient promptitude;) and after this, the expectorant syrup, in proper doses, two or three times a day.

Balsams.—The balsams ought not, generally, to be used in pulmonary affections, until the lungs are ready to be healed, that is, not until they are well cleansed by the use of the other means. The balsam of wild cherry is an excellent medicine of this class, and may be used with confidence, in all cases of lung affections in which balsams are indicated.

*If the precaution of keeping the other excretories of the body active, particularly those of the skin, be observed, the accumulations at the lungs will be much modified.

INFLAMMATION OF THE MOUTH.

(Stomatitis.)

There are various diseased conditions of the mouth that are attended with inflammation, and which seem alike to require attention. We have *simple stomatitis*, or simple inflammation of the mouth, *aphtheous stomatitis*, or thrush, and the *follicular stomatitis* or blistered sore mouth. For convenience' sake, these will be briefly considered separately.

SIMPLE INFLAMMATION OF THE MOUTH.—This is characterized by redness, heat, pain, and dryness of the mouth. The pain is much increased when substances come in contact with the affected parts, and even the touch of the tongue is very unpleasant. The lips often swell considerably; the eyes become red and painful, and general restlessness prevails.

The inflammation generally terminates in a few days by resolution, but it may end in ulceration, or even gangrene.

Treatment.—The difficulty may often be removed by holding fresh cold water in the mouth—renewing it as often as it gets warm. But if the inflammatory symptoms do not seem to subside readily, the external parts should be well bathed with some good stimulating liniment, while the following compound may be held in the mouth until relief be obtained.

Take of slippery elm bark.....	2 parts
“ Prickly ash “	1 part.
“ Lobelia leaves,.....	1 do

Pulverize, and mix with cold water.

Should there be danger of gangrene, tincture of myrrh and cayenne pepper should be used freely, while the dregs of myrrh, or a poultice of slippery elm with pepper and lobelia, is applied externally.

THRUSH.—This complaint is chiefly confined to young children, and is characterized by an inflamed condition of the mucous membrane of the mouth, which soon becomes covered with a coat of a curd-like appearance, that comes on first in patches, but in a day or two the tongue becomes completely covered with it. This white coating, sometimes, becomes detached and is thrown off, leaving the tongue of a livid color, but the parts soon become covered with it again.

Treatment.—In mild cases, nothing more may be necessary than wetting the mouth a few times with some astringent wash. But if it will not yield readily, the following may be used:

Take of bayberry bark,.....	1 oz.
“ Golden seal root,.....	$\frac{1}{2}$ do.
“ Cranesbill root, ...	$\frac{1}{2}$ do.
“ Borax, ...	$\frac{1}{2}$ do.
“ Privet leaves, ...	$\frac{1}{2}$ do.

Pulverize all separately, and mix. A decoction of this used cold or warm, will generally cure the most difficult cases in a few days.

FOLLICULAR INFLAMMATION OF THE MOUTH.—This is a slight affection; it may be either discrete or confluent. When it is discrete, it consists of little specks, that commence with small blisters, which soon break and leave whitish or yellowish disks with elevated red borders. These little sores are much more painful and troublesome than would be expected from sores of the size, by persons never afflicted, with them. In some cases these specks are few in number even, sometimes, only one or two, but in other cases they are numerous. The confluent form of the affection, commences in the discrete form and coalesces. This form is by no means confined to the mouth, it may continue down the throat into the stomach; but in this form, it is not common in this country; yet it is known to prevail in some seasons, considerably, in the interior of Holland.

Treatment.—The treatment should be commenced by a dose rhubarb, but without delaying for its operation, the parts should be treated locally by the use of the astringent tonic preparation, recommended for the last case mentioned.

INFLAMMATION OF THE PERITONEUM.

(*Péritonitis.*)

Inflammation of the peritoneum is ushered in by a feeling of lassitude, pain in the limbs, chills alternated with flushes of heat, headache and a sense of weight and uneasiness about

the stomach. Sooner or later, there is a pain felt in the abdomen,* while the inflammatory symptoms are becoming still more marked; the pulse grows tense, contracted and sharp; the stomach becomes irritable, and distressing nausea, with more or less vomiting, set in.

The abdomen soon becomes quite much distended, and very tender to pressure. The patient lays on his back and draws up his legs, thus to avoid the weight of the bed clothes.

The disease is very rapid in its course, sometimes terminating in death in the course of twelve hours, and hardly ever passing over five or six days.

Treatment.—The treatment of this affection is about the same as that recommended for inflammation of the bowels, to which the reader is referred.

INFLAMMATION OF THE PLEURA.

(*Pleuritis.*)

Pleurisy often proves a very violent and painful disease; but like all other affections, is dependent on circumstances for the character of its symptoms.

This affection comes on with the same premonitory symptoms that usher in peripneumonia or inflammation of the lungs, proper. But there is soon felt a pungent pain in the chest, generally in the right side, which is always much increased by full inspiration, or on coughing. The breathing is hurried, short, and generally more difficult when the patient lies on the affected side. The cough is short and dry, or attended only with a glary and nearly colorless sputa. The pain occasioned by the coughing, causes the patient to avoid or stifle it as much as possible, and hence the sufferer is disposed to *hack* and *sigh* a great deal.

The disease is brought on by exposure to cold, and the other usual causes of inflammation. It terminates most generally by resolution, or effusion.*

Treatment.—Among the fashionable physicians of our day, the chief dependence is on blood-letting. This practice gen-

*A popular writer (Andral,) states that the pain is not always experienced in peritonitis.

erally gives prompt relief, but it is obtained at too great a sacrifice. The blood is the *stream of life*, and should never therefore be thus inhumanly taken from the body.

The relief that is gained by blood-letting, is just as promptly obtained from the use of the vapor bath. Before this is applied, the patient should take a few doses of some stimulating tea, such as the diaphoretic powders, cayenne pepper, wild marjorum, &c., and then the vapor should be admitted freely to the whole body.

In difficult cases, when the pain does not yield readily, some stimulant or rubefacient, should be applied to the surface, before the bath is used.

To relieve the cough, expectorants must be used, and the bowels should be kept free by the use of enemas, or laxative bitters.

The main importance in this disease, is to keep the skin moist, and the lungs free. The treatment of inflammation of the lungs and that of this affection, should in the main, be about the same, for further particulars, the reader is, therefore, referred to the treatment of pneumonia, proper.

INFLAMMATION OF THE STOMACH.

(*Gastritis.*)

Acute inflammation of the stomach, as an idiopathic disease, is of rare occurrence. Chronic gastritis is much more common; and is indeed almost a certain concomitant of dyspepsia. It would seem that an organ so much exposed as is the stomach, would be much more liable to acute forms of disease than what the facts in the case appear to show.—When inflammation of this organ occurs in the acute form, it is generally the result of the injection of poisons, of some kind. These, alas, are too often taken under the idea of a medicine! Thus *arsenic*, *mercury*, *antimony*, and many others of the most fatal poisons, are often taken by the people from the hands of those accredited the most skillful physicians!—The mucous membrane is the part of the organ most generally implicated.

*The effusion, as noticed in the general remarks on inflammation, is very liable to contract adhesions to contiguous parts.

Symptoms.—Inflammation of the stomach, when it occurs in the acute form, commences sometimes with extreme pain in the epigastrium, attended with violent vomiting. But when the case is less violent, there may, at first, only be tenderness of the stomach attended with nausea; and when the difficulty arises from the taking of some mineral poison, there is generally a sensible metallic taste in the mouth. Vomiting, however, soon ensues, which is attended with great pain and distressing irritability of the stomach, so that the blandest drinks are instantly thrown up, when taken. There is, generally, an urgent desire for cool drinks, especially, for fresh water. The strength fails rapidly, and the spirits soon sink. The aspect of the countenance is expressive of great anxiety, suffering, and despondency. Sometimes, the pain is so excessive, as to cause violent delirium; but there is indeed, *generally*, more or less sympathy between the brain and stomach in affections, of these organs. The pulse, which, although at first is full, soon falls, and becomes very contracted, quick, and tense, and finally so small as scarcely to be felt. The bowels are, usually, in a constipated state.

The diagnostic or distinguishing symptoms of acute gastritis, are the irritation of the stomach, and vomiting,—the unintermittent character of the pain,—the smallness of the pulse &c. But perhaps the most certain sign, is the momentary cessation of the pain on taking a draught of cold water.

A subsidence of the irritation of the stomach, and the vomiting, diminution of the pain, moisture of the skin, fullness and regularity of the pulse, and a lateritious sediment in the urine, are all favorable signs. But on the other hand, should the violence of the pain and vomiting continue for several days, and should difficulty of breathing and hiccough supervene, and the pulse become smaller and more frequent, great danger may justly be apprehended. When, after the foregoing symptoms have progressed violently for a number of days, there is a sudden cessation of their violence, and the extremities become cold,—the pulse and strength of the patient suddenly sink, the countenance assume a peculiar cadaveric look, should the sight and hearing become dull, and delirium set in, or convulsion supervene, the case must inevitably terminate fatally.

Acute inflammation of the stomach may end in resolution, softening and ulceration, or gangrene; or what is often the case, the inflammation may assume the chronic form.

Post mortem appearances—In violent cases of gastritis that have continued a number of days before the occurrence of death,

the mucous membrane of the stomach will exhibit various appearances, on dissection. This coat of the organ, is, generally, much thickened in places; it is dense, and minutely injected; and is often found ulcerated in spots of more or less extent, presenting a dark yellowish or brown appearance of the parts. In the most violent cases, death, sometimes, takes place before any lesion of the parts occurs.

Treatment.—The indications of cure in this case, are: 1, to remove the cause of irritation; 2, to equalize the circulation; and 3, to tone up the system.

Should it be discovered that the patient has swallowed some poison, of any kind, and, especially, if it has recently been taken, means for its removal must be promptly instituted. If a stomach pump be at hand, it should be used, if not, an effort to excite efficient vomiting ought to be made by titillating the fauces with a feather. But should those means not prove immediately successful, an emetic of the strained infusion of lobelia should be immediately administered, and continued in suitable doses, until the desired object is accomplished.

The use of emetics in inflammation of the stomach may, to many, seem like harsh and dangerous treatment, and, indeed, it is one not generally approved by authors. But it should here be borne in mind, that it is not the *principle* that is really objectionable, but that the mischiefs, usually referred to by those opposed to their use, may, generally, be traced to the character of the articles used for the purpose. Thus, in the fashionable practice, where, mineral poisons are mostly used for this purpose, it may be expected that danger would necessarily attend their use. Lobelia, on the other hand, is not only *safe* but *mild* in its operation, and what is more, the irritation necessary to its specific operation, is comparatively insignificant. After the stomach is well cleansed, the treatment should be of the same character that is adopted at the onset, in cases of acute inflammation of the stomach, arising from other causes than those of poisonous ingesta.

The great object in all inflammations is to equalize the circulation, with this view it is well to apply the stimulating liniment over the entire body, and place the feet into a vessel of water as hot as can be borne; or the vapor bath may at once be applied. A sinapism should be placed over the region of the stomach, and suffered to remain as long as possible without blistering. Should the pain not have subsided at the removal of the sinapism, the stimulating and relaxant liniment, or the bathing drops may be applied to the parts from which

the mustard plaster is taken. External frictions are of incalculable utility, which may well be accounted for, if considered in view of the very extensive sympathy existing between the skin and stomach.

The medicines taken into the stomach, should consist of bland mucilaginous drinks, such as slippery elm water, taken cold, marsh-mallows infusion, flax seed tea, or oil of almonds. The neutralizing mixture is also very good to settle the stomach, if used in small doses; and so is even soda alone.

Enemas are also almost indispensable to the successful treatment of gastritis, they should consist of antispasmodics, laxatives, stimulants, and tonics, as the case may require.

In this affection, above all others, a careful attention to the diet should be observed. While the inflammation continues active, no food of any kind is digested, and hence it is worse than useless to keep up an irritation by the presence of food in the stomach. As soon as the stomach will bear it, such food as tapioca jelly, sago gruel, beef or chicken tea, and rice properly prepared, may be taken, until the stomach will bear stronger articles.

CHRONIC GASTRITIS.—When inflammation of the stomach assumes the chronic form, the symptoms differ, somewhat, from those that characterize the acute; they, however, differ more in point of their violence, than in any other respect.

The pain in chronic gastritis, is less severe than that attending the acute form, and in this, the stomach seems to be less relieved by cold drinks, than in the latter. In the chronic form, the diseased action always comes on more slowly; the stomach is less irritable, and the symptoms, in every respect, are less severe than in acute inflammation of the stomach.

As remarked under the head of *indigestion*, there is a very close intimacy or relationship, between this disease and the affection commonly called *dyspepsia*. All that host of symptoms, commonly ascribed to indigestion, are the common attendants of chronic inflammation of the mucous membrane of the stomach.

The treatment of chronic gastritis, differs little, in the main, from that recommended in the acute form of the disease.—Rubefacients, an occasional emetic of lobelia, mucilage of slippery elm, fine charcoal with milk, a dose of soda or saleratus as occasion may require, a decoction of yellow willow bark, cascarrilla, stomachics, and carminatives, are among the means used in connection with general treatment. For further particulars see the treatment for indigestion.

INFLAMMATION OF THE TONGUE.

(Glossitis.)

This is not a disease of frequent occurrence, but when it does set in, it is sometimes very violent, and rapidly fatal in its effects.

Symptoms.—The disease usually commences with a burning and throbbing pain in the tongue, which is attended with febrile symptoms that soon rise very high, and assume the synochal grade. The tongue is dry and parched, is of a fiery redness, and swells enormously, even to bursting; it is sometimes thrust out of the mouth, “appearing like a mass of raw flesh.” Deglutition is now impossible, and respiration very difficult, and as the disease advances, the patient, in addition to his intolerable suffering, is tortured with the apprehension of suffocation.

Inflammation of the tongue, in milder cases, generally, ends in resolution; but ulcerations, and even gangrene sometimes supervene. The writer was called with some other physicians, in council, to a distinguished individual, laboring under an attack of glossitis that ended in gangrene in a few hours. The disease perhaps was beyond the control of medicine from the commencement, but certainly so at the time that the writer first saw the patient.

The subsidence of the pain, swelling, and fever, and the appearance of moisture on the skin, may be regarded as favorable signs. But so long as the pain and swelling increase, the danger becomes more imminent.

Treatment.—The remedial process should be commenced by the use of active cathartics, so as to divert the diseased action from the part, if possible. By these means, it is true, the cause is not entirely removed from the system, yet the principle is justifiable in this case, for while the progressing lesion of the part is obviated, *time* is gained, which will suffice for the complete and safe removal of the difficulty. In the tongue, as in other organs where the texture and location of the part will not admit of the application of the means adequate to the subversion of the disease, a policy of the kind is always admissible.*

*In contending with an enemy, in the department of *physic* as well as the *military*, when we have not the chance of pitching the battle ourselves, it is our

The speedy operation of the cathartic may be promoted by the use of enemas, and in cases where the tongue is so swollen as to prevent the medicine from being taken in the ordinary way, it must be given entirely by injection. But without waiting for the operation of the cathartic, means should be instituted to produce a prompt and copious perspiration. To effect this object, the vapor bath is always the best adapted.

Local Treatment.—This should consist of rubefacients to the jaws and throat. If the rubefacient oil is not at hand, the oil of wild marjorum, pennyroyal, summer-savory, or cinnamon, must be used in its stead. A mustard plaster, applied around the jaws, and left to remain nearly long enough to blister, will, generally, be very serviceable. This should then be followed with a mixture, of equal parts of the tinctures of lobelia and cayenne pepper; or in place of this, the bathing drops will do as well. To the tongue, cold water, and cold mucilage of slippery elm, or flaxseed, must be constantly applied; and occasionally it should be washed with tincture of lobelia, or touched with the oil of this article. When ulceration, or gangrene occurs, it must be treated, as nearly as possible, in the same way as recommended for other parts thus affected.

INFLAMMATION OF THE TONSILS.

(*Tonsillitis.*)

For all practical purposes, the various *anginose* affections, may as well all be treated under this head, seeing that they are about of the same character—differing only a little in location. They all effect the same texture, and need the same medical treatment. By the older writers, they were all known under the common appellation, *Angina*, or *Quinsey*, but by some late authors we have, *Isthmitis* (*cynanche paristhmia*), *Amygdalitis* (*cynanche tonsillaris*), *Pharyngitis* (*cynanche pharyngea*), *Follicular Pharyngitis*, *Diphtheritic Pharyngitis*, *Œsophagitis* (*cynanche œsophagea*), all manifestly tending to confuse the student of medicine; for all these names mean

best policy to divert the enemy, and decoy him into a place most advantageous to us, before an attack is commenced—thus by the advantages of circumstances, a force much inferior may be successful.

nothing more than inflammation of the throat. This inflammation may indeed implicate certain parts of the throat more than others, yet in every instance, the remedies are pretty much the same; nor does their mode of application differ in any case.

Inflammation of the throat is very common in the Northern States, especially, in those parts where the climate is variable; the disease is also more common in the winter and spring, than any other part of the year.

Symptoms.—The disease usually begins with slight chills alternated with flushes of heat, which are succeeded with restlessness, accompanied with an uneasy feeling in the fauces, and more or less pain in the part on swallowing. In a few hours a fixed pain is felt about the tonsils, and the act of deglutition becomes more and more painful, until at last it is attended with extreme suffering, or altogether impossible. On examining the throat, one or more tonsils are found very much swollen, and the whole surface of the fauces very red and somewhat tumefied. The tongue also is swollen,—white, and covered with a thick layer of transparent viscid mucus. The face is red and tumid; the carotids beat strongly; respiration is difficult; hearing obtuse; the pulse frequent, hard, and full; and the voice is indistinct and whispering. In general, much more difficulty and pain is experienced in swallowing liquids, than soft and pultaceous solids. The pain, usually, shoots from the fauces to the ears, particularly, on attempting to speak or to swallow, and the mouth is opened great difficulty and pain. A very thick ropy mucus, commonly, adheres to the inflamed parts, and contributes much to the difficulty of respiration. The uvula and soft palate, are, generally, very much swollen; but the principal pain and difficulty of breathing, arise from the tumefaction of the tonsils. In some instances, the tonsils are covered with flakes of coagulable lymph, of a whitish color, resembling superficial sloughs. (*Eberle.*)

The quinsy is generally caused by colds, brought on by wet feet, wearing damp clothes, &c. Some persons are particularly predisposed to the affection, especially, when they have had it once or twice. Eberle thinks, and very correctly too, that the effects of mercury create an increased aptitude to the affection.

An ordinary attack of this affection, is not, generally, considered dangerous; but when the disease sets in violently, and the swelling be considerable, more or less danger may justly be apprehended.

The most common termination of quinsy or sore throat, is in resolution, but ulceration sometimes occurs, and in rare instances, gangrene.

Treatment.—In common cases, it may only be necessary to equalize the circulation, by appropriate means, and to bathe the throat and jaws well with a good stimulating liniment. In bad cases, the patient should be subjected to the relaxing effects of lobelia, by giving it in small doses often repeated, for a few hours. In the mean time, the bathing drops should be applied, freely, to the throat, with considerable friction, which should be followed with a good stimulating relaxant poultice:

If relief is not obtained by this course, the same plan may be adopted that is recommended for inflammation of the tongue. When symptoms of putridity or gangrene supervene, a course similar to that recommended as a local treatment for the sore throat in scarlatina should be pursued.

INVAGINATION OF THE INTESTINES.

(*Intussusceptio.*)

Intussusception is a disease of the intestines, in which one portion of the tube is introduced into another as represented in the following cut:



All parts of the bowels are subject to this derangement, but the small intestines, particularly the ileum; are found most prone to it. The length of the intestine thus invaginated, is usually, only a few inches; but cases are recorded, in

which several feet were involved. The number of these invaginations in a single case, is, generally, but one, but it happens, sometimes, that in the course of the intestine, as many as two, three, or even half a dozen, occur at a time. The part thus incarcerated, if not relieved by the force of the muscular fibres of the surrounding portion of the intestine, some fortunate motion of the body, or the effects of medicine, may contract adhesions to the surrounding portion, and remain in this way, or it may die and separate from the living portion, and pass off from the system. This must, however, be considered a very dangerous affection, as many suffering from it, die, in the course of from eight to twelve days. The symptoms of this disease, resemble those of inflammation of the bowels, or peritoneum so much, that it is hard to distinguish it from them; but when these symptoms prove unusually obstinate, intussusception may generally be suspected. The greatest distinguishing mark that we have, is, that this disease is not preceded by the usual premonitory symptoms of those other affections;—the pain coming on suddenly, and being soon followed with rumbling of the bowels.

Small children are most subject to many of the intestinal diseases, and it is supposed that nine-tenths of the cases that occur of this kind, are found among them.

The cause of the difficulty is supposed to be irregular or spasmodic contractions of the intestines, in which one portion contracts while the adjoining part is relaxed, and thus receives it.

It may be proper to remark that while this explanation of the manner in which the derangement takes place seems very reasonable; it is altogether probable that the irritation produced by unnatural and poisonous medicines, may, in many instances, give rise to these *irregular or spasmodic contractions*, and thus be the primary cause of this terrible disease.

Treatment.—Injections of lobelia and cayenne pepper tea, of proper strength, promise more in this affection, than any other means. The injections must be repeated until the system is completely relaxed; and after this, if relief is not obtained, the next plan will be to crowd the bowels as much as possible, with thick slippery elm mucilage. With a view to the best effects of this means, the patient must endeavor to retain as much of the injected material as possible. The anus may also be secured by an assistant, or by means of bandages. For the purpose of carrying up the injected material, as far as possible, it may be advisable to use a bogie,

which may be introduced as far as the sigmoid flexure at least, and then the material may be injected through it.

Injecting or forcing wind into the bowels, has also been recommended by some writers. This may be effected by the use of a common bellows, the point of which may be introduced into the rectum, or it may be forced into the bogie, and the wind thus blown into the bowels.

ITCH.

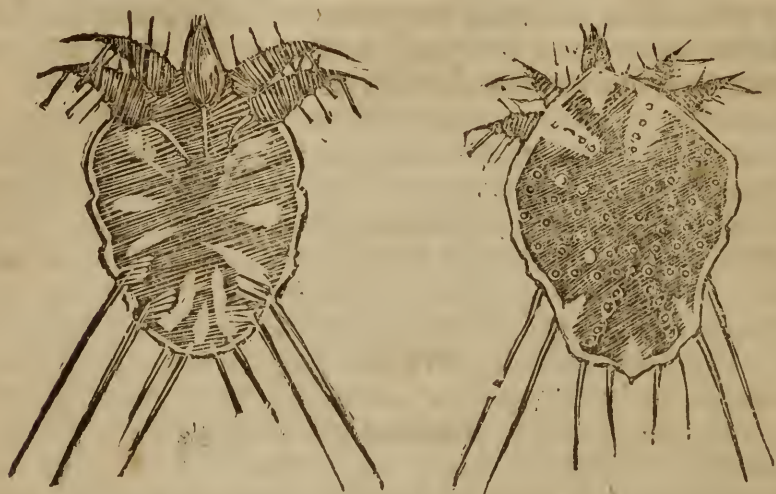
(*Scabies.*)

The itch is an affection of the skin, consisting of an assemblage of small vesicles, which, as its common name denotes, are attended with an intolerable itching. These vesicles are most common on the more delicate parts of the skin, as that between the fingers, on the wrist, in the flexures of the arms, &c. The itching is much enhanced by heat; thus the heat of a fire, or bed, will soon set the patient to scratching. The irritation attending these vesicles, causes a slight inflammation, that gives them a red appearance around the base,—the crown being filled with a viscid fluid, that at first is transparent, but afterwards becomes somewhat opaque and yellowish. As the vesicles are scratched open, the matter dries into scabs; and when these are again removed, slight bleeding will ensue. As the affection progresses, the vesicles will become more numerous, and appear in groups, and as they are scratched off, the scabs will coalesce and thus, sometimes, form small ulcers that occasionally become quite troublesome.

The itch is almost entirely confined to persons of uncleanly or filthy habits, and hence is considered a disgrace when met with, among respectable persons; although as it is a highly contagious affection, all are liable to receive it by contact with persons affected with it, and therefore the disgrace is less in acquiring than retaining it.

The itch is caused by the presence of a very small insect that is found in a small superficial canal, about an eighth of an inch from the vesicle. The insect, which is called the *acarus* or itch-ciron, is of the shape of a tortoise, but it has eight legs, which come out on the under side. Its back is beset

with a number of stiff bristles. The following cuts represent an upper and underside view of the animal many times magnified:



It is supposed that the time required for incubation, after the contact, is in children, from four to five or six days, and in adults, from ten to twenty days, according to the season.

Treatment.—Sulphur seems to be the most incompatible with their existence. An ointment prepared of it, with lard, and applied morning and evening to the parts affected, for from four to six days, and then washing, and changing clothes, will be found a certain remedy. The unpleasantness of the smell of sulphur, however, makes this article somewhat objectionable with some. But the smell of sulphur may be obviated, by incorporating with it some aromatic essential oils. The itch ointment formula, given among the compounds, is a very good preparation.

Those who do not like the sulphur, can cure themselves with an ointment made out of meadow fern, or narrow dock root. Internal remedies are seldom required in itch.

JAUNDICE.

(Icterus.)

Jaundice is occasioned by an obstruction of the course of the bile, which is consequently taken up by absorption, and thus carried into the circulation; and hence by its diffusion into the capillary vessels, stains the skin, eyes, mouth, throat, urine, &c., (being the only places in which it can be seen, although affecting the whole body just as much,) with a deep yellow.

This obstruction of the bile may arise from the presence of calculi in the gall-bladder, from inflammation of its duct, or even the liver itself. The obstruction may also be produced by constipation of the bowels, external injuries, and mental emotions.

The attending symptoms, are loss of appetite, dyspepsia, vertigo, nausea and perhaps vomiting, flatulency, and great dejection of spirits.

Treatment.—The treatment, in this complaint, should be commenced by taking a dose of the extract of mandrake, large enough to produce free evacuation from the bowels.—This medicine seems to have a specific action on the glandular system, and will generally reach the liver—stimulating it to a healthy action.

If the stomach is much disturbed, an emetic of lobelia may be necessary. As soon as the intestinal canal is cleansed, and the functions of the biliary system are restored, it will be necessary to remove the bilious matter from the circulatory and capillary systems. This should now be done, by the use of diaphoretics, aided if necessary, by the vapor bath.

When the system is well cleansed, the organs may be toned up by the use of *tonics*, such as the yellow root, cascarilla, colombo, &c. The laxative bitters, is an invaluable medicine in this disease, and should be used freely.

LEPROSY.

(Lepra.)

There are several varieties of leprosy, some of which, are common to this country. What are called, by authors, *lepra vulgaris*, *lepra alphas*, and *lepra nigricans*, are scaly affections of the skin, which, although divided into three varieties, consist essentially of the same disease.

This leprosy of our country, makes its appearance in circular scaly eruptions usually on the elbows and knees, but spreads afterwards over the other parts of the body. The first variety (*lepra vulgaris*,) consists of round patches of scales, that accumulate in thick crusts, which, if removed, will be quickly reproduced. The disease, commencing at the knees and elbows, passes from those parts, to the body, where it may spread over a large surface. The second variety (*lepra alphas*,) does not spread so extensively as the first, and, it differs, also, somewhat, in the face of the eruption: in this, the center, of the patches is depressed, and as the patches enlarge, it (*the center*,) will frequently heal up and thus recover the natural appearance. The third variety (*lepra nigricans*,) is distinguished from the other varieties, by the color of the patches, and the facility with which the scales may be removed. The color of the scales is dark, or purple; are easily removed, and as the skin under them comes to view, it is likewise found of a dark color; it remains bare much longer than in the other varieties, and is covered with a thin coat of bloody lymph.

The scaly leprosy seldom makes its appearance on the face, but is sometimes known to occupy the hairy scalp, and to affect even the nails of the fingers and toes, which become spongy, as it were, and assume a narrow and roundish shape not unlike the claws of a fowl.

EGYPTIAN OR GRECIAN LEPROSY.—The leprosy of the ancients, and which still appears in the oriental countries and Africa, is a disease much more dreadful than the leprosy of our country. This affection, which from the appearance of the skin, is called *elephantiasis*, consists of a horrible *tubercular* eruption, that commonly makes its appearance on the face, but as the disease advances, the skin of the entire body may become affected with it.

This disease is exceeding obstinate in its character, and was believed in ancient times, to be absolutely incurable; and from the idea of its being contagious, or perhaps more from the obscene appearance of the affected person, the unhappy sufferer was banished from society to die in obscurity.*

We are informed by the Moravian missionaries in Africa, that the natives there, have at this day, a large plain, enclosed with a very high wall, within which, all that are found affected with the disease are confined,—never to be released,—but there to support themselves, by raising their own provisions.

Treatment.—As leprosy is without doubt dependent on a depraved condition of the nutritive functions, its proper treatment involves especial attention to this matter. A thorough cleansing process, is first required; the condition of the stomach must be improved by the use of emetics, that of the bowels by proper cathartics and enemas, while the skin is relieved and restored to its healthy condition, by the use of diaphoretics, baths, and other proper external applications.

After the main channels or vascular organs, have been restored into a healthy condition, the system should be put under a course of depuratives and alteratives, as recommended for scrofula, while the attention is then mainly directed to the skin or more extensively affected parts.

The diseased parts should be covered with a mucilage of slippery elm, thickened with finely pulverized lobelia seed.—The parts must then be enveloped with a thin soft skin, or oiled silk, to exclude the air. This application should be left to remain only some 24 hours, when it must be renewed. The vapor bath should be applied, at the renewing of the external applications, as often as two or three times a week.

In these obstinate diseases, perseverance in the treatment is all important; and when from some peculiarities of the symptoms, the above applications will not be found the best adapted, they may be changed, and the olaginous liniments and ointments, may be used in their stead, or alternately with them,—washing the surface with soap-suds at the changes. The stramonium ointment will be found very good. It may be mixed with the extract or powder of blood-root, and appli-

*It is more than probable that the leprosy spoken of in the sacred scriptures, differed somewhat from the disease now called ELEPHANTIASIS. This latter is characterized by a dark rough appearance, whereas, *that* seems to have been of a light or white color. It is certain, however, that the leprosy spoken of in the bible, was fully as obstinate as the elephantiasis seems to be, and hence the miraculous cures by the SAVIOUR, were the more striking in character.

ed to the affected parts. Linseed oil has also been found serviceable.

LOCKED JAW.

(*Tetanus.*)

The disease called *locked jaw* consists of a spasmodic contraction of the muscles of the body. It comes on in some instances with great violence, extending rapidly to nearly all the large muscles, but more usually it progresses in a more gradual manner; in which case, a slight stiffness is at first perceived in the back part of the neck, which, after a short time, becomes considerably increased, and at length renders the motion of the head both difficult and painful. An uneasy sensation is now experienced at the root of the tongue, together with some difficulty in swallowing, and a tightness in the breast. There is also a pain at the extremity of the breast bone, shooting into the back. At this stage, a stiffness will be experienced in the jaws, which increases until the jaws will become so firmly set that they cannot at all be opened, and hence the name *locked jaw*.

This affection is occasioned by irritation of the nerves, brought on by the effects of cold, particularly, when conjoined with wetness,—by local injuries, such as, punctures, incisions, lacerations, bruises, and burns or scalds. Lacerated or punctured wounds, in tendinous parts, are very apt to bring on the disease.

Treatment.—The most prompt and certain remedy for this as well as most other spasmodic diseases, is the anti-spasmodic tincture. This must be poured into the mouth, between the cheeks and teeth, and should also be administered (diluted with a tea of the nervine tonic,) by injection. In the mean time an assistant should apply the stimulating liniment, with rapid friction, all over the body. When the spasm is broken up, the patient must continue to use the nervine tonic, in proper doses. It may be prepared in a strong tea, sweetened, and drank freely for several days.

The blue cohosh, swamp cabbage, and asafœtida, are also good in this disease.

MADNESS, CANINE.

(Hydrophobia.)

The term *hydrophobia* signifies a dread of water, which is one of the characteristic symptoms of the disease resulting from the bite of rabid animals. But this symptom is not peculiar to this affection, as it, sometimes, attends other disorders, as hysteria, and varies febrile and other affections attended with an excitable irregular nervous impressibility. Nevertheless, as a dread of liquids is so much more pressing and constant in this disease than any other, the name is still properly retained by most writers. It seems, however, that this singular dread is not confined to the sight and noise of liquids, but may be produced by the sight of polished bodies, and of mirrors.

“Dr. James observes, that this peculiar affection properly belongs to the canine genus, viz: dogs, foxes, and wolves; in which animals only it seems to be innate and natural, scarcely ever appearing in any others, except when communicated from these. When a dog is afflicted with madness, he becomes dull, solitary, and endeavors to hide himself, seldom barking, but making a murmuring noise, and refusing all kinds of meat and drink. He flies at strangers; but, in this stage, he remembers and respects his master; his head and tail hang down; he walks as if overpowered by sleep; and a bite, at this period, though dangerous, is not so apt to bring on the disease in the animal bitten as one inflicted at a later period. The dog at length begins to pant; he breathes quickly and heavily; his tongue hangs out; his mouth is continually open, and discharges a large quantity of froth. Sometimes he walks slowly, as if half asleep, and then runs suddenly, but not always directly forward. At last he forgets his master; his eyes have a dull, watery, red appearance: he grows thin and weak, often falls down, gets up and attempts to fly at every thing, becoming very soon quite furious. The animal seldom lives in the latter state longer than thirty hours; and it is said, that his bites at the end of his existence, are the most dangerous. The throat of a person suffering hydrophobia is always much affected; and, it is asserted, the nearer the bite to this part the more perilous.”

It appears that the disease can be communicated to man by rabid animals that are not of the canine species, provided that they have the genuine disease. So far yet known, how-

ever, it would seem, that a person cannot communicate the disease to his own species: yet prudence would dictate that caution should be observed in this matter, as it appears that hydrophobia has been produced in dogs by inoculation from the human subject.

The appearance of the affection, after the bite, is at an uncertain period, sometimes, within a fortnight, a month, or according to some, it may not come on for a year, and even then appear. The bitten part may heal up without any signs of the hydrophobic symptoms, and yet the disease come on afterwards.

Hydrophobia may take place without the appearance of any local symptoms; but more usually the individual feels a slight pain in the bitten part, which somewhat resembles rheumatism. From this the pain will be felt to wander through the body, while a universal uneasiness, and heaviness will be experienced; there will be disturbed sleep, frightful dreams, sudden startings and spasms; the patient evinces a disposition of anxiety, sighing, and a desire of solitude. The symptoms now become more severe, daily, pains are felt to shoot from the wound toward the throat, which are soon followed with a sensation of choking, and a horror and dread at the sight or noise of water. The patient is, however, able to swallow other substances with tolerable ease; but as he endeavors to resist or overcome the dread of liquids, the mental and physical effort is singularly distressing and horrific; every muscle of the face is thrown into violent agitation, and those of the throat and trunk contract so forcibly and convulsively as to threaten suffocation. These agitations or paroxysms, at first are only of a moment's duration; but, subsequently, they become more prolonged and still more violent.

In the majority of instances, the patient retains his reason, and will sometimes warn bystanders to keep away, lest he should bite or otherwise injure them.

At last the patient becomes exceedingly agitated and furious; his eyes sparkle; his face is red; he froths at the mouth; his countenance bears an expression of the deepest agony; and being convulsed in every part of the body, becomes a frightful object to behold. Vomiting finally ensues; a clammy sweat breaks out over his face and body; the pulse becomes small and intermittent, respiration difficult, and the poor sufferer sinks in the midst of the most awful sufferings.

Treatment.—Numerous remedies have been recommended for the cure of this terrible disease, many of which have been regarded as specifics. The chickweed, (*alsine media*,) water

plantain, (*alisma plantago**,) scarlet pimperel, (*anagallis arvensis*†,) the ash-colored ground liverwort, (*lichen caninus*,‡) scul-cap, valerian, camphor, and carbonate of ammonia, have all been highly extolled for their virtues in the cure of hydrophobia. Besides these, a number of poisonous articles have also been recommended; the most prominent of which, are the following: mercury,|| arsenic, copper filings, strychnine, (*nux vomica*,) nightshade, jimson weed, poke root, tobacco, spanish flies, &c.

But with all these boasted remedies, it has been declared by many, that nothing short of the knife or the actual cautery, (*burning, or cutting out the wound*,) will promise any certainty of cure, while on the other hand, some have affirmed that even excision, or amputation, is unsafe to be relied upon.—Now the truth may be found just between those notions; it is certain that excision or cauterization, though very severe and unnecessary operations, would if well practised immediately on the occurrence of the bite, be pretty certain to be effectual, while it is equally certain that if the bite is not cut out until after the poison has become diffused through the system, it will do no good whatever.

“When we take,” says Howard, “a survey of the empirical, contradictory, extravagant and pernicious means which have been used or recommended in the treatment of this terrible malady, we are forcibly driven to the reflection that the popular practice of medicine, as taught in the schools, was nothing more than a chaos of confusion—a tissue of error, and of dangerous and unprofitable experiment; for of all the various and contradictory modes of treatment, recommended by different authors, whether of stimulating or depleting, of relaxing or exciting, of burning or cutting, of warm bathing or cold bathing, nothing as yet is known to the *learned authors* of medicine, which can be relied upon as a certain cure. As Dr. Good observes, ‘our curative practice is still unfortunately all afloat, and we have neither helm to steer by, nor compass to direct our course. ‘There is indeed,’ continues he, ‘no disease for which so many remedies have been devised, and none in which, the mortifying character of variety of varieties has been so strikingly written upon all of them.’

“A new era has, however, taken place in the annals of me-

*This article, as a prophylactic against hydrophobia, gained great popularity in Russia.

†This is one of the oldest remedies for this disease; both Galen and *Ætius* recommended it.

‡The celebrated Dr. Mead asserts that in more than one hundred instances he prevented the disease by the use of this remedy.

||The noted remedy of Dr. Merchant, consisted principally of the sub. sulphate of mercury and the chickweed.

dical science; the practice of medicine has become established upon new and correct principles; the means of cure have been investigated and improved; whilst at the same time, the powers of the physician to control disease have become augmented and multiplied. There is good reason to believe that the lobelia inflata will be found a certain remedy for this terrific disease, as the few trials which have been made of it,* give strong proofs of its powers, and high promise of its future usefulness.

"We are well aware that the medical faculty scout at the idea of a cure for hydrophobia, as they also do at all other improvements of the healing art which do not originate with themselves. This is virtually denying that the people have any right to investigate this subject, or to administer or receive any thing as medicine but what they sanction, or what passes through their hands. But light and knowledge, with giant strides, are marching through the world, and if the physicians *will not* seize and appropriate to usefulness, the gifts of nature, the people will do it themselves. And it is high time the practice of medicine was taken out of the hands of the boasting, selfish, dominant professors of this most important art, and restored to those to whom it rightfully appertains, and who are principally to be benefitted by it.

"If the lobelia had so often been tested by the fashionable physicians, in the cure of hydrophobia, as it has been by the people, its fame would have been spread from sea to sea, and its echoes would have penetrated the deepest recesses of every civilized land. But the origin of this remedy is too humble; its adoption would eclipse the already waning glory of scientific and professional fame. It must therefore be despised and rejected; yes, the most valuable gift of Nature's God is neglected, because the honor of a vaunting, vain-glorious profession may be tarnished by the acknowledgment of its virtues."

Vapor Bath.—It is stated that the great utility of the vapor bath in the cure of hydrophobia, was discovered in France by the following singular incident: Dr. Buisson, having pressing symptoms of hydrophobia, and despairing of a cure, selected the vapor bath as the easiest means of his death. The vapor was raised to a heat of 126 degrees Fahrenheit: the doctor taking leave of friends and all earthly objects, went into the bath to take his final exit; but to his astonishment, instead of bringing on suffocation and death, it relieved his hydrophobic symptoms with singular rapidity. Dr. Buisson in the com-

*It has since been thoroughly tried in numerous instances.

munication of his case to the Academy of Arts and Sciences, at Paris, says that by the same means he had cured upwards of eighty patients of hydrophobia, and intended to try it in cholera, plague, yellow fever and gout.

The vapor bath has since fully established its character as a prophylactic against this disease. It should be applied once every other day for two weeks, and after this, for two weeks more, every second day. The lobelia must be used in emetic doses immediately on coming out of the bath, as the relaxation produced by the vapor, will much ensure the good effects of this valuable medicine.

Local Treatment.—In this disease the local treatment is a very important part; as soon as possible after the bite, the wound should be well washed out with the sour tincture of lobelia; and then a poultice made of equal parts of lobelia seed well pulverized, and slippery elm flour, mixed up with vinegar must be applied and worn (renewing it every day,) on the wound until it is healed up.

Nauseants.—The lobelia should be given once in two or three hours, in broken doses; that is, in doses large enough to keep the stomach somewhat nauseated. The relaxing and anti-spasmodic effects thus produced, are entirely incompatible to the condition favorable to hydrophobia.

Nervine Tonics.—The sculcap and valerian should be taken in a tea two or three times a day, with a view to defend the nerves against the morbid influence, which is very important as the disease chiefly implicates the nervous system.

The writer cured two cases of the disease, some two years since, simply with the sour* tincture of lobelia, given internally in nauseating doses once in two or three hours, and applying it freely externally,—using at the same time, a strong tea of sculcap and valerian.

*It is important to observe the precaution of preparing the lobelia for this use, with vinegar instead of spirits, as the vinegar itself is a powerful prophylactic against this disease. In favor of its good effects in hydrophobia, we have the authority of Rhazes, among the ancients, and among the moderns, Werlhof, Buchholz, and Rust.

MEASLES.

(Rubeola.)

This is a disease that is very common among children, prevailing some seasons in the character of an epidemic.

Symptoms.—"The disease commences with the running of water from the eyes and nostrils, sneezing, cough, and swelling of the eyes and face, with occasional shivering, cold in the back, and drowsiness. An eruption first appears behind the ears, on the third or fourth day, spreading downwards to the neck and forwards to the chin, mouth or forehead, but seldom shows itself on the body until a day or two after. The eruption speckles the skin somewhat like the bites of fleas, and is of a crimson color and not scarlet, as in scarlet fever. The crimson specks of measles arrange themselves in groups of irregular circles, or crescents, and leave the skin between them of its natural color, which never occurs in scarlet fever. The great danger in measles does not arise from the abundance of the eruption, the severity of the fever; the oppressed breathing, nor the violence of the cough; but almost wholly from the secondary inflammation that comes on, or rather after the fever or eruption have gone off, which usually happens in nine or ten days. Many children have this secondary stage produced or increased, by cramming them with too strong food, when they are beginning to recover, with the false notion of strengthening them. It is no less absurd to dose the little patients, after measles, with purgatives, when their bowels are in proper order."—*Abernethy.*

The cause of measles evidently is contagion, although, rare instances occur in which the disease arises without any chance of the agency of contagion.

The disease which this resembles most, is scarlatina, and here the diagnosis is sometimes difficult.

The following table is given in Marshall Hall's Practice, showing the difference between the symptoms of scarlet fever and measles:

1. <i>The prevailing Epidemic.</i>	
Rubeola, [<i>measles.</i>]	Scarlatina, [<i>scarlet fever.</i>]
2. <i>The latent period.</i>	
From 10 to 14 days.	From 1 to 6 days.
3. <i>Symptoms.</i>	
Febrile catarrh, coryza, [<i>run-</i>	Febrile sore throat, great

ning at the nose,] Ophthalmia | heat and tumidity of surface,
[inflammation of the eyes.] | nausea or vomiting.

4. *Appearance of the Eruption.*

On the fourth day. | On the second day in S. simplex. 3rd, in S. anginosa, and later still in S. maligna.

5. *Form of the Eruption.*

Circular dots; crescentic arcs. | Diffused.
[growing circles.]

6. The Indoles, [*disposition or character.*]

Mostly inflammatory. | Often typhoid, and especially in S. maligna.

7. *Principal Complications.*

Affections of the anterior nares, the larynx, trachea, lungs, &c. | Affections of the posterior nares, fauces, &c.

8. *Principal Sequela.*

Thoracic disease. | Inflammatory anasarca; meningitis, [*inflammation of the membranes of the brain.*]

Measles are not generally attended with much danger, except when complicated with other diseases, or when the affection results in other complaints that are of a fatal tendency. Symptoms of disease in the breast and head, may be regarded as being at least tedious to manage. The same individual is liable to the affection but once.

Treatment.—In mild cases of the disease, it is seldom necessary to use much medicine. Some gentle diaphoretic, such as chamomile, pennyroyal, thoroughwort, or the diaphoretic powders may be used to keep out the eruption. In more difficult cases, it may become necessary to use more active means. Should there be much fever and pain, and the eruption not appear, or appear imperfectly, the patient must take some permanently stimulant and relaxant medicines, such as the following:

Take of Lobelia herb,.....	} equal parts.
“ Thoroughwort,.....	
“ Seneka snake-root,.....	

Pulverize and mix. It may be taken in molasses or some preserves, or it may be stirred into some hot water and sweetened, and then taken in suitable doses. This, with friction on the surface, will generally bring the determining powers to the surface, and fully develope the eruption.*

*The country people have a remedy that they call *sheep saffron*, by the use of

Should the stomach be much out of order, an emetic may become necessary, and if the bowels be constipated, they must be relieved by the use of enemas, as it is not best to use much cathartic medicine in measles. When other diseases supervene, they must be treated according to the symptoms that attend them.

MILK SICKNESS.

In some sections of Kentucky, Ohio, Indiana, and Illinois, an affection prevails, which from its cause, and symptoms, is variously named, *milk sickness*, *puking complaint*, and *trembles*. The disease is caused indirectly by a poisonous plant, which, being eaten by cattle, thus communicates its poison to the milk, as well as the flesh of the animal, which, when eaten by the people, gives rise to the disease.

Symptoms.—"Milk sickness usually comes on with lassitude and weariness, with a sense of great exhaustion, and trembling from slight exertions; the breath is very offensive, having a peculiar and disagreeable smell. Obstinate costiveness either accompanies or succeeds these symptoms, which are soon followed by sickness at the stomach, and vomiting; and great distress, with a burning sensation at the stomach." If the disease is not checked, it will soon bring on great debility, which is generally attended with a singular trembling.

Treatment.—The symptoms readily suggest the treatment most appropriate in this affection. Thorough emetics are particularly indicated. The anti-spasmodic tincture, or the lobelia in powder with the nervine tonic, in equal portions, will be better in this disease, than the lobelia alone. When the stomach is well cleansed, the next object should be to relieve the bowels from the pressing constipation, that is always attendant on the disease. For this purpose, injections are necessary. Among the best preparations for this use is the following:

which, they bring out the eruption with great success. Indeed, with this remedy, an old woman will treat more patients, and loose a less number, than the best physicians, practicing after the old plan. But a remedy so filthy and disgusting, it is not designed here to recommend. A compound of carbonate of ammonia and the bitter snakeroot, in equal parts, taken in proper doses will answer perhaps equally well.

Take of soft soap, ...	1	table spoonful.
" Common cathartic, ...	1	tea spoonful.
" Lobelia, ...	$\frac{1}{2}$	do.
" Cayenne pepper, ...	$\frac{1}{4}$	do.

Scald in a quart of water, and administer at once while warm. The injections must be repeated at short intervals, until the desired effect is produced. In the mean time, a dose of some mild but active cathartic should be given.

Charcoal.—In this disease, prepared charcoal is one of the best remedies, and should be used, in proper doses, once in three or four hours during the entire treatment, after the lobelia has done its duty.

External applications.—The oil of spearmint or peppermint, applied over the region of the stomach, will be very good to quiet the irritability of this organ. If the oil of the mints is not at hand, the herb bruised and scalded, may be applied, first sprinkling the surface with some cayenne pepper.

Tonics.—As soon as the symptoms give way, the use of tonics must be commenced, and continued until the strength is again restored. The bitter and nervine tonics may be used, in equal portions, three times a day, in teaspoonful doses.

MORTIFICATION.

(*Mortificatio.*)

Mortification is generally divided by writers, into two stages, *gangrene* and *sphacelus*.* It is generally calculated that gangrene is within the reach of medicine, while sphacelus is absolutely beyond the control of all remedies.

Mortification simply means the death of a part, and may take place in any part of the body. When it implicates the bones, it is usually called necrosis or caries. When mortification is about to take place in a part, the affected structure loses its sensibility, it becomes cold, the blood ceases to cir-

* "When any part of the body loses all motion, sensibility and natural heat, and becomes of a brown livid or black color, it is said to be affected with sphacelus. When the part becomes a cold, black, fibrous, senseless substance, it is termed a slough. As long as any sensibility, motion, and warmth continue the state of the disorder is said to be gangrene."

culate, and absorption is suspended. The process by which these changes are accomplished is usually progressive; but is much governed by the soundness of the constitution—the violence of the exciting causes, and still more by the nature or structure of the affected part. Thus mortification, in some parts, takes place in a few hours, whilst, in others, it does not make its appearance for several weeks or even months, after the parts have first become diseased and active inflammation has set in. “The cellular, cutaneous, and mucous, may be enumerated as the textures which are more frequently seized with mortification than any other; and it is worthy of remark that these are parts that are extremely well supplied with blood, especially the two latter. Nevertheless, in the skin and cellular substance, this event takes place most frequently in situations which are remote from the central organ of the circulation, as on the hands, feet and posterior portions of the trunk. In the mucous system, the parts most liable to mortification are the gums, the inside of the cheeks, the tonsils, the colon, the inferior third of the ileum, the urinary bladder, and the lining membrane of the vulva. The serous membranes, muscles, ligaments, tendons, aponeuroses, and cartilages are rarely affected in this way; and the same remark holds good in reference to the arteries, veins, and absorbents. The three latter of these structures, indeed, seem to possess a most astonishing conservative power, and hence it is not uncommon to find them retain their integrity in the midst of the sphacelated part. In malignant scarlet fever, attended with mortification of the tonsils and upper part of the neck, I have several times seen the carotid go on in the performance of its function, and the individual recover, notwithstanding the detachment of immense sloughs of the skin and cellular substance; and similar phenomena have often been witnessed in mortification of the inferior extremities.”—*Gross*.

Mortification is almost universally preceded by inflammation; and the height of the inflammatory action will sometimes furnish us with a pretty certain index to the nearness of its approach. “Hiccough,” says sir Astley Cooper, “is the characteristic sign of gangrene, in whatever part of the body it is situated. The fact is, when gangrene arises from a diseased state of the constitution, the stomach is extremely deranged, and this derangement is followed by a spasmodic contraction of the diaphragm, producing hiccough.”

Any cause which prevents the entrance of arterial blood, will give rise to mortification. This fact is exemplified in the occurrence of strangulated hernia, in the application of ligatures, &c. Poisons, excessive lacerations, extreme cold

or heat, great pressure, and paralysis in debilitated habits, are frequent causes of the death of parts.

Treatment.—The most important indication in the general treatment, is to maintain the free circulation of the blood, as it is upon this fluid that the vitality of every part is dependent. Cayenne pepper, compound tincture of myrrh, or any other of the permanent stimulants, must be taken in large and frequent doses. Stimulating liniments with lively friction, should be applied to the entire body. Should this treatment not increase the volume and frequency of the pulse, the vapor bath must be applied, two or three times a day, in addition to the other means.

Local treatment.—When the affected parts are situated externally, a poultice, made of the dregs of myrrh, sprinkled over with cayenne pepper, must be immediately applied, and renewed every six hours, or its use should be alternated with that of a poultice made of the diaphoretic powders with wheat or rye flour enough to give it adhesiveness. Before this is applied, its surface should likewise be sprinkled with cayenne pepper. At each renewal or change of the poultices, the parts should be saturated with the anti-spasmodic tincture, or the compound tincture of myrrh.

The pyroligneous acid, is perhaps the most active anti-septic that we possess, and if it is at hand, should always be preferred to our less active agents. The acid should be freely applied, three or four times a day, by means of a feather, rag, or sponge. During the intervals between the applications, the affected parts should be covered with either of the above named poultices, or with a poultice made of charcoal and yeast.

When mortification is threatened in the internal organs, as in the bowels and stomach, the same medicines may be taken internally, as per stomach, and by injection. The pyroligneous acid which is very analogous to vinegar and equally safe to take, should be used of proper strength, three or four times a day. Charcoal, compound tincture of myrrh, and cayenne pepper must likewise be freely used.

MUMPS.

(Parotitis.)

This is an affection of the parotid glands, which are situated below the ears and immediately behind the angles of the jaws. The disease is contagious, and is sometimes known to prevail epidemically.

Mumps usually occurs but once in the same individual; but it sometimes happens that only the gland on one side is affected, which will not prevent the occurrence of the affection on the other side at some future period.

Children, and young persons, are most liable to contract this disease.

The mumps is not a dangerous disease, though by taking cold, a feverish state of the system may be produced, and the affection may become translated to other glands of the body; thus in the male it may attack the testes, and in the female the mamæ, or breasts. When this takes place, the case may require special and careful attention. The glands affected usually swell very much, but the skin is not discolored. The swelling, in ordinary cases, continues increasing, until about the fourth or fifth day, when it will again gradually subside.

Treatment.—It is seldom the case, that much medicine is necessary in this affection. The parts should, however, be kept warm, by wearing flannels around them, and some mild diaphoretic teas may be drank. But should the disease prove severe, such remedies as are applicable in other inflammatory affections, should be used. The feet may be bathed in a pail of warm water. A strong tea of prickley ash bark and wild majorum, should be drank freely, while the bowels are kept open by the use of laxatives.

The local means to be used, are also about the same as for other inflammatory affections. A poultice made by scalding equal parts of fine slippery elm bark and flour, with just a sufficient quantity of water to form the poultice of a proper consistence, is very good. When the pain is severe, a little fine camphor and lobelia herb, may be sprinkled on the surface. Liniments made of lobelia, camphor and amonia, as strong as the affected parts will bear, are also good.

NETTLE RASH.

(Uticaria.)

This very common and troublesome affection, is characterized by a florid appearance of the skin, which may effect every part of the body. The efflorescence is accompanied with an intolerable irritation, and as the parts are scratched, (from which the patient can scarcely refrain,) a very severe burning will set in, and the skin will raise in knots or wheals resembling the marks of a sting from an insect.

Cause.—The nettle rash or hives arises in persons of sanguine and nervous temperaments, from a disordered condition of the stomach; from certain obnoxious kinds of food; from over-heating the body, &c.

Treatment.—To obviate, in those persons who are much subject to this distressing, though by no means dangerous affection, their predisposition to the complaint, is a matter of considerable difficulty, if indeed it be at all practicable. But it is not generally a hard matter, to relieve for the time, every pressing symptom. This may be done by bringing the alimentary canal into a healthy condition, by the use of emetics, cathartics, &c. Bathing is very good, and will generally give immediate relief to the itching and smarting, as well as the heat and pain. Washing the parts with water saturated with salt, will in nearly every instance, give prompt relief.

NIGHTMARE.

(Incubus.)

This is an affection that only comes on during sleep; and consists of an interrupted condition of the functions of respiration and the circulation. The brain being thus disturbed, gives rise to frightful dreaming. The difficulty of breathing, and the smothering at the heart will generally occasion the presentment of danger from violence, as from the intrusion of

an assassin, a furious wild beast, or perhaps some demoniac influence.

The difficulty generally arises from indigestion, which causes distention of the stomach and bowels, by the gases or wind that is eliminated by the attending fermentation, and which thus pressing against the diaphragm, crowds the viscera of the chest, so as to produce the oppression already named. A diseased condition of the liver, and spleen, and constipation of the bowels, will also sometimes occasion the nightmare. In persons predisposed to the affection, an attack is almost sure to be brought on by taking a heavy meal immediately on going to bed. Nervous irritability, great anxiety of mind, grief, dispendency, intense thought, and late hours are also favorable to an attack.

The attack generally comes on gradually, and lasts usually for several hours; the patient lays, often without the power of motion or of speaking, groaning and smothering, and evinces the greatest agony.

Treatment.—To overcome the attack or paroxysm, it is, generally, only necessary to awaken the individual out of his sleep, when he will soon be entirely relieved. But to prevent the return of the complaint, attention to the digestive organs will be necessary. If the stomach is much out of order, an emetic will become necessary. The bowels should be kept free with laxative bitters. The shower bath, taken two or three times a week, is an excellent remedy. The nervine tonic, cascarilla, and various other simple articles will be found useful.

OBSTRUCTED MENSTRUATION.

(*Amenorrhœa.*)

Treatment.—The various emenagogues, found in materia medica, will all be found useful, some individuals will find more benefit from one article, and some from another. Among the most useful and certain emenagogues is the black cohosh, which should be well dried and used in a tea, as much as the patient can take without producing headache and dizziness.

The emenagogue infusion, if taken freely at the proper time, will be found an excellent preparation for this difficulty.

While using it, the feet should be well bathed in warm water before a hot fire, the patient being surrounded with a blanket, and drinking some tincture of myrrh or some other warming medicine to promote perspiration.

Stimulating bitters are clearly indicated, and as a remedy of this kind, the following is a good example:

Take of Mother wort,.....	2 ounces.
“ Cascarilla, or poplar bark,.....	1 do.
“ Wild ginger,.....	2 do.
“ Black cohosh, ...	2 do.
“ Cayenne pepper, ...	1 do.

Pulverize and mix. For use, one ounce should be scalded in a pint of boiling water, strained and sweetened, and drank through the course of a day.

PALPITATION OF THE HEART.

(*Palpitatio.*)

“An irregular beating, and fluttering motion of the heart, very frequently attends dyspepsia, sick headache, neuralgia, asthma, consumption, hysteria, gout, constitutional debility, and in persons of nervous temperament it is frequently occasioned by any slight derangement of the system. The use of strong coffee, tobacco, an oppressed condition of the stomach from food that is hard of digestion, grief, anxiety or any sudden emotion of the mind, will in some, occasion irregular throbbing and fluttering motions of the heart.”

The beating of the heart is sometimes so violent, that it may readily be perceived by the eye or even the ear of a bystander. The affection is usually attended with a difficulty of breathing, paleness of the countenance, and a purple color of the lips.

These symptoms are, however, not always the effects of functional derangement; but may result from organic disease of the heart or its large vessels. When this is the case, it is generally very difficult to cure.

Treatment.—When the palpitation is symptomatic of some other affection, it will generally give way to the means appropriate to those affections. When there seems to be little

other disturbance of the body, the difficulty may generally be removed by one or two good doses of the nervine tincture, or of the tincture of asafœtida.

The stomach and bowels, in this affection, must always be kept in good order by appropriate means; and should any irregularities in the circulation occur, these must also receive prompt attention. The symptoms must point out the means that should be used, whether they ought to be relaxants, stimulants, or evacnants.

The constant use of cayenne pepper, with an occasional dose of the nervine tincture, will be found very good to prevent palpitation of the heart. The nervine preparation recommended for hysterics, will also be found quite useful in this complaint.

PALSY.

(*Paralysis*.)

When the sensation, or voluntary motion of a part of the body is impaired or lost, the part is said to be palsied. In rare cases, the sensation, and the power of motion are both destroyed at the same time.

Palsy usually attacks only one side of the body, and often only a portion of this, as a limb, shoulder, or hip. Sometimes however, parts of both sides may be attacked together.

When palsy occurs in the whole of one side of the body, it is termed *hemiplegia*; if both the inferior extremities, from the hips downwards, are paralyzed, it is called *paraplegia*; and when only some one particular part is affected, it is usually called *paralysis partialis*, by authors.

The disease usually comes on suddenly with the immediate loss of sensation, or motion, or both; but in some instances, this is preceded by a numbness, coldness, and paleness, and sometimes by slight convulsive twitches. When the head is much affected, the eye and mouth are occasionally drawn to one side, the memory and other mental functions are impaired, and the speech is indistinct and incoherent. When the extremities are affected, and the disease is of long duration, there is often considerable flaccidity and wasting of the muscles of the limbs.

Palsy is caused by injuries or affections of the brain, spinal

marrow or the nerves themselves. Hemiplegia is generally produced by affections of the brain; paraplegia, by those of the spinal marrow, and paralysis partialis, by disease or injuries of the nerves of the part.

Treatment.—Immediately on the attack of palsy, the body should be well bathed with the stimulating liniment, which ought to be applied with considerable friction; then the patient, after taking a dose or two of a strong tea of cayenne pepper, should be placed in the vapor bath. The heat of the bath should be gradually raised until it is as high as is comfortable for the patient.* After a free perspiration is produced, the patient must be taken out, and, after being well rubbed and dried with a course towel, he should have another coat of the liniment, and then be placed in bed, with a hot stone to the feet. A strong tea, made of equal parts of cayenne pepper, valerian, and sculeap, should now be drank freely, so as to produce a general perspiration.

The affected parts should now be well bathed with the stimulating liniment or the bathing drops, as often as once in four or five hours; and once a day, some of the rubefacient oil, mixed with an equal quantity of the extract of peruvian bark or of quinine, should be applied to the paralyzed parts.

This course of treatment should be renewed every day until permanent relief is obtained. It is well to keep the parts warm between the bathings, by means of flannels, wrung out of the rubefacient wash well heated.

Rubbing the parts well along the course of the nerves, and also the spine, will sometimes prove very beneficial.

In cases of partial paralysis, a cure may generally be effected by the simple use of the liniments, and stimulating nervine teas.

PILES.

(*Hæmorrhoids.*)

The pile is a very common affection of the veins of the rec-

*Care must be taken during the use of the bath, so as not to raise it too high, as the patient will sometimes not be able to judge the temperature, from the loss of sensation: and this remark will also apply to the use of hot stones, or other hot applications to the diseased parts.

tum, which occurs in both sexes, and in all classes of society.

The patient first experiences a singular itching and uneasiness about the parts, which is soon followed by an enlargement of the veins, causing tumors that are filled with dark blood. These tumors, which are sometimes from three to six in number, are extremely painful, particularly on going to stool.

When the bowels are in a constipated state, it is often very difficult to procure a passage, owing to the obstruction produced by the tumors; but the attendant irritation brings on tenesmus and bearing down, which forces down the hardened passages, often bringing with them the tumors when they are situated low in the bowel. If they are large, they will usually remain without, and thus prove a source of great annoyance. But the tumors frequently burst, and thus will bleed, sometimes, very profusely.

When the piles bleed, they are called *open* or *bleeding* piles, and when they do not, they receive the name of *blind* piles. When the tumors are situated high up in the rectum or bowel, they are called *internal* piles, while those that are pushed down without, are called *external* piles.

Piles are occasioned by a relaxed condition of the parts, which may arise from the use of drastic purgatives, particularly those that spend their influence chiefly on the lower part of the intestines, such as aloes, and the most of the pills now offered to the public. Habitual costiveness, sedentary habits, and heavy lifting may also bring them on.

Piles are seldom dangerous, unless they become so from the excessive loss of blood, that they sometimes occasion.

Treatment.—Recent cases of piles, may soon be relieved by the use of astringent injections. The bowels must, however, always be kept regular by the use of proper diet, or by means of the laxative bitters.

Old and confirmed cases of piles are sometimes considerably difficult to cure. In the treatment of these, it is necessary, in the first place, to get the bowels into a good condition by the use of laxatives, and laxative enemata. The use of astringent injections must then be commenced, and continued three or four times a day. In the mean time, the pile ointment must be applied by smearing it on a rag or bit of linnen, which should then be introduced into the bowel and left to remain until the syringe is used, when it should be renewed.

Sometimes the tumors grow hard and very irritable, and in this state will not readily yield to the foregoing treatment. When this is the case, it is sometimes best to touch them

slightly with some moistened caustic potash, two or three times a day, for a day or two, and then, after washing them off with an astringent preparation, heal them up with the stramonium or pile ointment.

PLAGUE.

(*Pestis.*)

The plague is an oriental disease, infesting the eastern borders of the mediterranean; but it seems not to be confined to these parts, as we have in history some deplorable accounts of its ravages at Marseilles, Moscow, London and elsewhere. Egypt, Asia Minor, and Greece seem to have suffered most from this dreadful disease. In the days of Hypocrates, it played dreadful ravages at Athens, and the unprecedented success of this individual, in the management of this epidemic, done much in gaining for him his immortal character.

It appears that the plague possesses many of the characteristics of a typhus affection. But some late writers class it among the exanthematous diseases; yet even this does not argue much against its being typhus, as *typhus fever* as well as *typhoid*, is often attended with considerable eruption. The eruption of this disease, consists of pustules, carbuncles, and buboes of a white, livid or even black color.*

The disease is usually ushered in with a sense of languor, lassitude, and chills, but is soon followed with an intolerable heat, almost consuming to the entrails. There is intense headache, which is most severe in the temples; the tongue is usually much swollen, (which is by some considered a marked symptom of the plague,) and is covered with a white fur, glistening in the centre. A remarkable staggering, generally sets in, in the early part of the disease, and oft times the patient is seized with violent delirium, which sometimes sets in soon after the attack commences. There is considerable pain in the region of the heart, and stomach, vomiting is likewise a

*A grade of continued fever occurs in this country, commonly called *cold plague*, *congestive fever*, &c., which has been associated with this disease by some physicians, but without just reason. The treatment of congestive fever, differs little from that of the malignant grade of remittent, with which it is identical. The local hyperæmia or congestions, may, however, need special attention, and may generally be obviated by equalizing the circulation, together with the use of counter-irritants.

very common symptom, which is attended with a sense of faintness and sinking. The countenance becomes haggard, and the features distorted, presenting a hideous appearance. The skin is dry and harsh, and the pulse accelerated, but small and contracted, and ranges from 115 to 130 to the minute. Respiration is laborious, and the speech indistinct and tremulous. Darting pains are experienced in various parts of the body, but especially in the axilla and groins, producing in those parts carbuncles, and buboes, according to the tissues that become affected. The strength generally declines with terrible rapidity, and the patient sinks with the deepest anguish and despair into the arms of death.

Treatment.—Awful as this disease is, it nevertheless admits of successful medication. After raging through Egypt, Lybia, Persia, Syria, Cyprus, Lemnos and other Isles of the great sea, the plague seemed to pour with tremendous fury into Greece, and to threaten the entire depopulation of Athens. The eloquent Robison, describes the suffering of its inhabitants thus:—"The diseased were first smitten in the head; from this the malady passed down through the whole body, leaving in one shapeless, ruined mass, that noble form divine. But the sufferers seldom waited for this terrible catastrophe; but, in the beginning, in the fury of distraction, plunged into wells, rivers, and the sea, to quench the consuming fire which devoured within them!" And yet, at this dreadful juncture of ruin, Athens was delivered by a single man—the immortal Hyppocrates, who, as with Egyptian magic, stayed at once the travelling besom.

The proper treatment of plague varies little from that for *yellow fever*, but should always be prompt and vigorous.—Bathing, above all other means, seems to have been of the most benefit in the treatment of this dreadful malady. Hyppocrates depended chiefly on this, and the free use of stimulants. It is said that by an elevated temperature, the morbid contagion causing the disease, may be destroyed; and does this not give some useful hints in favor of hot bathing? This doctrine is well corroborated by the conduct of that chief of physicians already mentioned, in staying the progress of this malady at Athens; he built large fires in all the streets and alleys in the city, evidently thus to heat and purify the air: and this together with the use of the baths, stimulants and tonics were, indeed, the principle means employed on this occasion. But if the treatment recommended for yellow, or typhus fever be perseveringly instituted in the management of plague, reasonable success may well be expected.

POISONING.

Poisoning may happen from accidents, or design, and may be produced by a great variety of agents, found in the mineral, vegetable, and animal kingdoms. Poisons are generally divided into six classes, viz: 1, the *corrosive or escharotic*; 2, the *astringent*; 3, the *acid*; 4, the *narcotic and stupefying*; 5, the *narcotico-acrid*; and 6, the *septic or putrescent*.

As there are some important peculiarities, attendant on a number of the most prominent poisons, it is best to consider those separately.

MERCURY AND ITS PREPARATIONS.—Dr. Pareira of London, who has treated on the poisonous effects of mercury at length, states: "When large doses of some of the soluble salts of mercury have been swallowed, gastro-enteritis [*inflammation of the stomach and bowels*,] is produced. The patient complains of an acrid styptic taste in the mouth, and a feeling of burning and tightness in the throat; the face is usually flushed and sometimes swelled, violent vomiting and purging (frequently of bloody matters) soon come on, the vomiting being increased by every thing taken into the stomach: oftentimes there is irritation of the urinary passages, and sometimes even suppression of the urine; the pulse is small, frequent, and contracted; the respiration difficult; the extremities cold. In some cases *salivation* is produced: this seldom comes on during the first 24 hours; and is seldom delayed beyond the fourth day. Towards the termination of the case, some indications of *disorder of the cerebro-spinal system* comes on, such as slight drowsiness and stupor, or even coma; tremors and twitchings of the muscles, and sometimes even violent convulsions; in some cases paraplegia. These symptoms terminate in death. Post-mortem examination discovers inflammation (and its consequences) of the gastro-intestinal membrane."

The following description of poisoning by the muriate of mercury is given by Dr. Wood in the U. S. Dispensatory: "Swallowed in poisonous doses, it produces burning heat in the throat, excruciating pain in the stomach and bowels, excessive thirst, anxiety, nausea and frequent retching with vomiting of bloody mucus, diarrhœa, and sometimes bloody stools, small and frequent pulse, cold sweats, general debility, difficult respiration, cramps in the extremities, faintings, insensibility, convulsions, and death. The mucous membrane

of the stomach exhibits on dissection all the signs which mark the action of a violent corrosive poison."

Salivation.—Mercury frequently exhibits its most violent effects on the mouth and throat, in producing what is technically called *ptyalism*. "The first observable effects of mercury in inducing ptyalism are a coppery taste in the mouth, a slight soreness of the gums, and an unpleasant sensation in the sockets of the teeth when the jaws are firmly closed. Shortly afterwards the gums begin to swell, a line of whitish matter is seen along their edges, and the breath is affected with a peculiar and very disagreeable smell, called the mercurial fœtor. The saliva at the same time begins to flow; and if the affection proceeds, the gums, tongue, throat, and face are much swollen; ulcerations attack the lining membrane of the mouth and fauces; the jaws become excessively painful; the tongue is coated with a thick whitish fur; and the saliva flows in streams from the mouth. It occasionally happens, that the affection thus induced in the mouth proceeds to a dangerous extent, inducing extensive ulcerations, gangrene, and even hemorrhage."

A case of salivation came under the notice of the writer, in which the entire cheek was mortified, being almost perfectly black from the nose to the ear, and from the prominence of the malarum to the angle of the jaw. The sides of the neck were also black, as well as several places on the body. In this situation, the child lived several days and nights in the greatest agony. Cases of very extensive sloughing of various parts of the mouth and throat, are not of unfrequent occurrence. Last season a case occurred in this place, of a respectable lady, in which the inside of the entire mouth had sloughed away to the depth of nearly half an inch.

This sloughing and ulceration of the mouth and throat, often continues until the bones become implicated; the teeth loosen and fall out; the gums decay, and the bones of the face rot away, and thus sometimes produces the most hideous deformity.

"A very frequent consequence," says Dr. Pareira, "of excessive mercurial salivation, and the attendant ulceration and sloughing, is contraction of the mucous membrane in the neighborhood of the anterior arches of the palate, whereby the patient is prevented from opening the mouth, except to a very slight extent. I have met with several such cases. In one (that of a female) it followed the use of a few grains of blue pill, administered for a liver complaint. The patient remains unable to open her mouth wider than half an inch.—

Several operations have been performed by different surgeons, and the contracted parts freely divided, but the relief was only temporary. In another instance (that of a child, four years of age) it was produced by a few grains of calomel. Though several years have elapsed since, the patient is obliged to suck his food through the spaces left between the jaws by the loss of the alveolar process."

Erethismus.—This affection which is commonly called *mercurial disease*, is not an uncommon attendant of the use of mercury even in common practice. It comes on with great depression of strength, a sense of anxiety about the præcordia, irregular action of the heart, frequent sighing, trembling, a small, quick, and sometimes intermitting pulse, occasional vomiting, a pale contracted countenance, a sense of coldness and languor. The system is extremely irritable, and morbidly sensitive. These symptoms continue on increasing in severity, until the patient sinks in death.

Neuralgia from the effects of mercury.—Various painful affections of the nerves, are found to follow the use of mercury. The pains wander through the system, giving rise to extreme restlessness and suffering, which is always increased on the change of the weather or state of the atmosphere. It is very common to hear people complain of mercurial *rheumatism*, and *pains in the bones*. Many people, from these sufferings, have a thousand times wished themselves dead, to be out of their misery. Shaking palsy is also a result of the injurious effects of mercury on the nerves.

Enlargements of the glands.—Glandular enlargements, particularly of the liver, spleen, mesenteric glands, pancreas, &c., are occasional results of the poisonous effects of mercury. Chronic diseases and enlargements of the liver, are now infinitely more common than they were before the great "*regulator of the secretions*" was so much in use.

Authors also furnish us with detailed accounts of mercurial purging, mercurial bloating, mercurial fever, mercurial erysipelas, mercurial leprosy, mercurial exanthemous, and miliary eruptions, mercurial sore eyes, mercurial paralysis, mercurial epilepsy, mercurial apoplexy, mercurial asthmas, mercurial cancers, mercurial dyspepsia, mercurial hypochondriasis, mercurial consumption, mercurial dropsies, mercurial affections of the bones, periosteum, joints, heart, kidneys, brain, spinal marrow, &c.; &c.

ARSENIC.—This is one of the most fatal corrosive poisons, and is the article generally used for criminal purposes, or self destruction. “The symptoms it produces are an austere taste; fetid state of the mouth; frequent ptyalism; continual hawking; constrictions of the pharynx and œsophagus; the sensation of the teeth being on edge; hiccups; nausea; anxiety; frequent sinkings; burning pain in the præcordia; inflammation of the lips, tongue, palate, throat, and œsophagus; irritable stomach, so as not to be able to support the blandest drinks; vomiting of matters, sometimes brown, at other times bloody; black, horribly fetid stools; small, frequent, concentrated, and irregular pulse, but occasionally slow and unequal; palpitations; syncope; insatiable thirst; burning heat over the whole body, or a sensation of icy coldness; difficult respiration; cold sweats; scanty, red, and bloody urine; change in the countenance; a livid circle around the eyelids; swelling and itching of the body; livid spots over the surface, and occasionally a miliary eruption; prostration of strength; loss of feeling, especially in the feet and hands; delirium, convulsions, often accompanied with insupportable priapism; falling off of the hair; detachment of the cuticle, &c. Sometimes there exists inflammation and burning pain in the urino-genital organs. It is very rare to observe all these symptoms in the same individual. In some cases, indeed, they are nearly all wanting, death taking place without any pain or prominent symptom. After death the morbid appearances are various. In some cases, no vestige of lesion can be discovered. The appearances, however, in the generality of cases, are the following:—The mouth, stomach, and intestines are inflamed; the stomach and duodenum exhibit spots resembling eschars, and perforations of all their coats; and the villous coat of the former is in a manner destroyed, and reduced to the consistence of a reddish brown pulp.

“Dr. Christison divides the poisonous effects of arsenous acid into three orders of cases, according to the character and violence of the symptoms. In the first order, the poison produces symptoms of irritation and inflammation along the course of the alimentary canal, and commonly kills in from one to three days. In the second, the signs of inflammation are moderate, or even altogether wanting, and death occurs in five or six hours, at a period too early for inflammation to be always fully developed. In the third order of cases, two stages occur, one in which inflammatory symptoms are developed, as in the first order; the other, marked by symptoms referable to nervous irritation, such as imperfect palsy of the arms or legs, epilepsy, tetanus, hysterical affections, mania,

and coma. It is a general character of this poison to induce inflammation of the stomach in almost all instances, provided death does not take place immediately, whatever be the part to which it is applied. Thus the poison, when applied to a fresh wound, will give rise to the same morbid appearances in the stomach and intestines, as when it is swallowed. In some cases, observed by Drs. Mall and Bailie, the rectum was much inflamed, while the colon and small intestines escaped."

ANTIMONY.—The symptoms of poisoning by antimony and its preparations, do not differ in many respects from those that characterize poisoning by most other active corrosive articles. There is usually a metallic taste; nausea; copious vomiting; frequent hickup; burning pain in the stomach; colic; violent purging attendant with griping pains; fainting; small, contracted, and sometimes accelerated pulse; difficult respiration; difficulty of swallowing; coldness of the skin; convulsive movements; painful cramps, particularly in the legs; prostration; insensibility, and death. The tartrate of antimony and potassa or *tartar emetic*, is the most common form in which the poison is taken.

The other mineral corrosive and escharotic poisons, such as Bismuth, Copper, Lead, Zinc, Tin, Nitre, and their preparations, produce symptoms so near like those attending poisoning by Mercury, Arsenic, and Antimony, that it is not necessary here to give a separate description of them.

ACIDS.—When acids are taken in poisonous doses, the symptoms differ, in some respects, from those of the metallic corrosives and escharotics. The patient will generally experience a sour acrid taste, burning in the throat, which is increased by pressure, swallowing or coughing; pain in the stomach, accompanied with eructations; vomiting; a corroded condition of the membranes of the mouth, throat; and stomach.—The countenance is glazed, and the skin cold.

The matter thrown up effervesces with lime, and soda. Nitric acid occasions yellow stains, and sulphuric acid, black.

ALKALIES.—The alkaline poisons, such as carbonate of potash, ammonia, &c., produce "violent caustic, acrid taste; great heat in the throat, with destruction of the lining membrane; difficult and painful deglutition; vomiting of bloody matter, which turns the yellow of tumeric brown; acute pain in the stomach; cold sweats, weakness, hiccough; violent colic pains, with purging of bloody stools and membranous flakes, and death."

The materials thrown up, will efferverse with vinegar, and the other acids.

ALCOHOL.—When alcohol is taken in excessive doses, it is frequently followed with violent symptoms, and occasionally by death. The symptoms are violent intoxication; delirium; irritability of the stomach; vomiting; apoplexy; paralysis, and sometimes convulsions.

The breath generally smells of the liquor, by which the case may usually be distinguished from other affections.

GASES.—Carbonic acid gas, when respired, produces spasms of the glottis; great difficulty of breathing; dimness of sight; loss of strength, and finally insensibility, apoplexy and speedy death. It is this gas that is called *damps*, in wells and caverns. It is also produced by the burning of charcoal, and thus by carelessness or a want of knowledge of its fatal effects, many persons are destroyed by it.

Chlorine, when inhaled, produces violent irritation of the organs of respiration; cough, with a raising of blood; and permanent pulmonary diseases.

The other gasses, although producing some effect on the organs of respiration, present the common phenomena arising from the effects of sedative agents. The symptoms therefore are general prostration, paralysis, apoplexy and death.

NARCOTICS.—The narcotic poisons, such as the deadly night shade, opium, jimson, fox-glove, hemlock, &c., when taken into the system, give rise to symptoms differing considerably from those attending all the other poisons. Soon after the poison is taken, the subject will feel a sense of heaviness in the head, stupor, and a peculiar numbness; there is a disposition to vomit, which soon becomes pressing. A kind of intoxication will take place; the pupils of the eyes will dilate, and the patient falls into a deadly sleep, or perhaps becomes affected with lively delirium, or on the other hand, a furious craziness; there is great anxiety and dejection; the pulse is variable, but at first full and strong. Convulsions of various parts of the body, and palsy of the limbs often set in, and if not relieved, the patient soon sinks in death.

ANIMAL POISONS.—The poisons communicated to the body by the bites or stings of serpents, and insects, present a train of symptoms that are somewhat peculiar. The bite of a venomous serpent, as from the Copperhead, Mockeson, Viper, Rattlesnake, &c., is immediately followed with a sharp and

intolerable pain, that soon extends to the surrounding parts. The bitten parts soon swell considerably, and in some instances, the entire body becomes very much swollen; the color of the skin is various, at first pale, then reddish, yellow or greenish, and livid. Faintings, vomiting, and sometimes convulsions set it; the pulse is frequent and irregular; the breathing difficult, and the mental faculties sometimes very much deranged.

The inflammation of the bitten parts, generally ends in resolution; but not unfrequently in ulceration, and even sometimes in mortification.

The stings of insects are not generally followed with much inconvenience, except the intolerable pain and the swelling that usually attend them.

Treatment.—The treatment of poisoning varies very much, depending entirely on the nature of the cause or agency by which the affection is instituted.

The first thing to be done, when any of the metallic corrosive or escharotic poisons are taken into the system, is to excite vomiting as quick as possible. This may sometimes be done best by tickling the fauces or throat with a feather. But if this does not readily excite free or copious vomiting, a full dose of lobelia should at once be taken, and repeated once in four or five minutes, until the stomach is well cleansed.—Should the lobelia (owing to the blunted condition of the nerves,) not operate promptly, a dose of equal parts of ipecac, blood-root, cayenne pepper, and bayberry must be given as soon as possible.

This being done the patient should take some of the white of eggs, beat in a bowl or other vessel, in half teacupful doses, once in an hour or two, until three or four doses are taken.—For this purpose the mucilage of slippery elm, flaxseed, or comfrey may be used, but it is not so good as the albumen of eggs. Sweet milk is also recommended by authors for this purpose.

After the poison is evacuated, and the urgent symptoms are removed, the patient should continue to drink, occasionally, some mucilaginous preparations, with a view to soothe and heal the stomach. The remaining treatment must be regulated according to the symptoms.

In cases of salivation and ulceration of the mouth, a strong tea of the astringent tonic should be used to wash the parts, which may be done by means of a swab. To correct the intolerable feter, a solution of the chloride of lime or of soda, should be used. One drachm of the chloride may be added

to a pint of water, and the parts washed with it three or four times a day.

The healing process may now be commenced with the use of the compound tincture of myrrh, which should at first be diluted with water, and applied to the affected parts freely. The compound recommended for aphthe or thrush, should be used freely as a wash. Sugar of lead seems to possess a chemical control over the disease, and may be used in a mild solution occasionally after the other medicines have been applied.

The internal remedies should consist of alteratives, stimulants, and tonics. The tincture of myrrh, sarsaparilla, and narrow dock root are all good.

The alterative syrup, given by Dr. Beach, is a very good medicine in the treatment of mercurial diseases; it is made as follows:

Take of American, or foreign Sarsaparilla,.....	6 ounces.
“ Guaiacum shavings,.....	3 do.
“ Sassafras-root bark,.....	2 do.
“ Elder flowers,.....	2 do.
“ Burdock root,.....	2 do.

Add of cheap spirits and water, each one gallon; boil, and pour off the liquid; then add water repeatedly, and boil till the strength is obtained, strain, and reduce to sixteen porter bottles full, then add 25 lbs. of clarified sugar. Let it stand twenty four hours to settle, pour off and bottle for use. The dose is a wine glassful, three times a day.

A plaster made of venice turpentine and sulphur, may be applied to the parts externally, by means of strips of cloth suited to the locations of the disease.

When the concentrated acids are swallowed, it is not advisable to give an emetic. The inconvenience of their use in these cases, is that they will not operate promptly, and what is more, the acids are likely to augment the mischief by being thus agitated in the stomach, and carried up again through the œsophagus and mouth. The acids may be effectually neutralized by the agency of the alkalies.

For poisoning by the sulphuric, muriatic, citric, and acetic acids, the carbonates of soda, potash, lime and magnesia, may be taken indiscriminately. But for the nitric and oxalic, carbonates of magnesia, and lime, can alone be employed with safety.

It is very important when sulphuric acid is taken internally or applied to the surface, to observe the precaution not to take or apply water, as this with the acid will produce a very

considerable heat, and thus materially enhance the mischief.

The acids in turn, are the proper antidotes for poisoning by the alkalies. The vegetable acids are always to be preferred. Vinegar, lemon juice, or citric or tartaric acid in solution, should be taken freely until relief is obtained. The fixed oils, such as castor, linseed, almond and olive, form soaps with the free alkalies, and thereby destroy their caustic effects.

Poisoning by alcohol, requires active emetics of lobelia.—When the medicine cannot be given per stomach, it must be administered by injection. When the patient is feverish, the shower bath is very useful. The lobelia should be continued, in broken or emetic doses, as the case may require.

Cold effusions to the head, are very good in cases of poisoning by the gases. Stimulating liniments and rubefacients, are required when the heat of the surface is low. When the vital energies are much exhausted, the vapor baths and active stimulants, such as cayenne pepper and the tincture of myrrh must be used.

When any of the narcotic or stupefying poisons are taken, the patient must immediately have an active emetic of ipecac and lobelia in equal parts. The bowels must also be well evacuated, by means of stimulating and laxative enemata.

As soon as the alimentary canal is cleared of the poison, the patient should take vinegar freely, as strong as it can be drank; and this article diluted, ought also to be administered by injection.

The entire surface should be bathed once every hour or two, with a preparation made by scalding a table spoonful of cayenne pepper in a pint of good vinegar.

The vapor bath is also an excellent means in poisoning from narcotics; the vapor should be applied to the whole body, keeping the head cool by means of cloths, dipped into cold vinegar.

Poisonous bites must be treated with applications made by bruising or pounding into a pulp, equal parts of lobelia and the large plantain, taken in the green state, or if dry they must be moistened with warm water. This poultice should be renewed every two hours until the pain ceases, and the inflammatory symptoms subside.

Broken doses of lobelia should also be taken internally; and if there is much sickness, the portions must be increased so as to procure vomiting. Other attending symptoms, must be treated according to their character and urgency.

The stings of insects seldom require medical treatment; but if there is much swelling, the application recommended for poisonous bites, will be found useful. The anti-spasmodic

tincture, and also the sour tincture of lobelia, are very good to bathe the parts with.

RHEUMATISM.

(*Rheumatismus.*)

This is an inflammatory affection of the fibrous tissues, and is chiefly confined to the articulations, particularly the large ones, as the knees, ankles, hips, shoulders, and elbows. The inflammatory symptoms exhibit various degrees in their violence and duration, and hence the disease has been divided into two varieties, the *acute* and the *chronic*. The disease has also been named after some of its principal locations, thus we have *lumbago*, when it occupies the articulations in the loins; *sciatica*, when it affects the hip; *arthrodynia* when situated in the other joints.

Symptoms.—Rheumatism comes on with severe pain, which in a day or two is followed with swelling of the joints. There is usually considerable stiffness, or want of mobility. In the chronic variety, the skin is never discolored, but in the acute, it is generally a little red. The pains are very apt to shift from one joint to another, and sometimes it runs along the course of the muscles connected with the affected joints.

The disease may arise at any time of the year when there are frequent vicissitudes of the weather from heat to cold, but the spring and autumn are the seasons in which it is most common. Young persons are more subject to the acute variety, while in older people the reverse obtains.

Rheumatism is occasioned by cold, and is brought on most generally by wearing wet or damp clothes, working in cold and wet places, &c.

People that are much affected with rheumatism, are very sensitive to the approach of wet weather, as they will be affected with wandering and aching pains through their limbs.

Treatment.—Most old school writers are of the opinion that rheumatism is but little susceptible of control by medication, and that when it sets in, it generally runs its course, which is from three to six weeks.* But in the reformed prac-

*"One set of physicians," says Dr. Macintosh, "depend entirely upon blood-

tice it is seldom the case that more than three or four days are required to effect a complete cure.

Ordinary cases of rheumatism may be successfully treated by the use of a powder, composed of equal parts of gum guaiacum and black cohosh in fine powder, taken in doses of a teaspoonful three or four times a day, and to be accompanied with the use of the bathing drops, applied to the affected parts frequently, with lively and long continued friction.

In more obstinate cases, it may be necessary to use in connection with this treatment, the vapor bath, and lobelia, in broken but frequent doses. In the most difficult cases, it is necessary to use the lobelia in emetic doses, and when given in this way, the practitioner should always endeavor to manage so as to bring to bear the full relaxing powers of the medicine. It should be preceded with the vapor bath, and then given in nauseating doses for several hours before emesis is produced.

The use of the vapor bath and lobelia emetics, should be practiced every day, or every second day, according to the severity of the symptoms, and this course should be continued until the disease is broken up.

It has already been stated that the use of the bathing drops and the guaiacum powders, should be continued throughout the entire treatment.

The bowels must be kept open by the use of the laxative bitters.

During convalescence, the patient should take two or three doses of the spiced bitters, daily.

RICKETS.

(*Rachitis*.)

This is a very distressing disease of children, and seldom occurring before the ninth, and after the twenty-fourth month of their age. The disease is characterized by softening and

letting; another upon purging; another upon exciting long-continued profuse perspirations; a fourth upon the exhibition of bark alone; and a fifth upon a course of mercury to produce salivation. It is no wonder, therefore, under such empirical treatment, that an attack of the disease used formerly to continue violent for such a long period of time. Formerly an attack of acute rheumatism, with its consequences, generally confined the patient for twelve months, that is to say, before he regained his ordinary state of health, and few got off with less than six months' confinement to bed."

distortion of the bones of the back in the loins. The muscles become flacid, the head enlarges, the carotids are distended, the limbs waste away, the abdomen swells and grows tense; the stools are frequent and loose, a slow fever succeeds, with cough and difficulty of breathing, and the nervous system becoming more and more affected the poor little sufferer finally sinks in death.

On dissection, the liver, spleen, and other glands have been found enlarged and in a scirrhus state.

Treatment.—The general treatment in rickets, should differ little from that recommended for scrofula, but it must be perseveringly used, as this disease is extremely difficult to cure. The alterative syrup, comfrey, and solomon's seal are good articles in rickets.

The bowels should be kept open with the use of small doses of the extract of mandrake, taken every evening, or every second evening, as the case may require.

Cold bathing should be practised once every day or two, and the patient ought to be rubbed freely with a coarse towel, or the flesh brush should be used immediately after the cold bath. The stimulating liniment, or bathing drops, should be applied freely all over the body, soon after the friction with the towel or brush.

Mechanical support.—Physicians of the old school, depend mostly on mechanical means, for relief in rickets. Those means consist chiefly of stays to the small of the back, by means of pads and springs, as well as bandages. It is, however, very obvious, that mechanical means can be of but little advantage in cases in which the constitutional rickety diathesis is not obviated.

Plasters.—Strengthening plasters will, sometimes, be found very useful in rickets. After sprinkling a very small quantity of pepper, (if this should prove too irritating, ginger will do.) on the surface, a plaster of large size may be laid over the small of the back, and worn as long as it will stick. The irritating plaster, applied to the same parts, will generally be found useful.

Tonics.—Tonics are very important remedies, and should always be used. A tonic cordial may be prepared or the spiced bitters, cascarilla, or any other pleasant bitter or tonic medicine may be taken three or four times a day.

Regimen.—In this affection, attention to the diet, and exercise, is of paramount importance. The child should not be fed with any food that is hard of digestion, fat meats, cheese, butter, &c., should not be allowed. The child should not be suffered to exercise too much in an upright position; nevertheless, it must be taken out, so as to get the fresh and circulating air.

RUPTURE.

(*Hernia.*)

This affection consists of a breach or rupture, of the muscular wall of the abdomen, and the protrusion of some of the viscera of the belly. The parts that are thus forced out, are generally a part of the omentum, or of the intestines, or both. But instances have occurred, in which the stomach, the liver, the spleen, uterus, ovaries, and bladder have been forced through the openings. The protrusion consists of a kind of a sack, composed of a portion of peritoneum, that is pushed out before the intestine or other organ that may be protruded.

The rupture may take place at various parts of the anterior walls of the belly, but it occurs most commonly in the groin, at the upper part of the thigh, and at the navel.

When the hernial contents lie passively in the sack, and admit of being readily put back into the abdomen, it is termed a *reducible hernia*; and when they cannot be readily put back, but yet the passage in the intestine remains free, it is called *irreducible*. In cases of irreducible hernia, in which also the passage in the intestine is obstructed, the difficulty is called *strangulated* or *incarcerated hernia*. Again we have *congenital hernia*, and, which, indeed, is of very common occurrence. In this case, the extruded viscera are not surrounded with the peritoneum, but descend nakedly through the tunica vaginalis into the serotum.

Hernia, is also variously named, according to the extent and situation of the extruded part; thus, if only a part of the circumference of the intestine forms the tumor, it is called *enterocoele*; if a piece of the omentum only, it is named *epiplocele*; and if both the intestine and omentum contribute in the formation of the tumor, it is called *entero-epiplocele*. When the contents of the hernia are protruded at the abdominal

ring, but only pass as low as the groin, or labium pudendi, the case receives the name of *bubonocoele*, or *ingual hernia*; when the parts descend into the scrotum, it is called an *oscheocoele* or *scrotal hernia*. When the parts protrude below Poupart's ligament, it is called *femoral* or *crural*; when at the navel, *exomphalos*, or *umbilical*; and when it occurs at any other or promiscuous part of the front of the abdomen, it is called *ventral hernia*.

Treatment.—As soon as a rupture is discovered, gentle efforts should be made to return the protruded parts, which may generally be done with the fingers, in such a way as readily suggests itself to every individual of common judgment. To facilitate the operation, the patient should lay on the opposite side, with his knees drawn up a little, and his head somewhat raised, so as to relax or slacken the muscles of the abdomen. When the parts are returned, the patient should wear a compress, or truss, so as to prevent the parts from returning again.

When the parts cannot be readily returned, the system must be well relaxed with lobelia and steam, after which the operation will generally be found more successful.

In cases of strangulation, the patient should be immediately placed over the bath, and take nauseating doses of lobelia while being vaporized; and on leaving the bath a large dose of lobelia should be given, so as to sicken considerably, when by proper management the difficulty may generally be overcome. But should this method be unsuccessful, the patient should be placed in bed, and be surrounded with some steaming stones, and should have two or three injections of a weak tea of lobelia, in order thus still to extend the relaxation. While this is going on, the practitioner should be engaged very carefully to put back the extruded part. The writer has found an application of finely pulverized lobelia seed, moistened with slippery elm mucilage, very excellent as a relaxing means.

The rupture may sometimes be healed up, especially when of recent standing, or when in a young subject, by wearing over it a plaster of the extract of oak bark.

SCALL.

(Porri $\acute{g}$ o.)

There are several cutaneous affections, that are generally treated under this head. Some of these are contagious, and others not. The most important are what are commonly called *scald head* (*tinea capitis*,) and the *running* or *crusted tetter* (*impetigo*.)

The first of these is a contagious affection that is characterized by an eruption of small, flat, yellow, umbilicated, deeply seated pustules, distinct or clustered, which soon concrete, and form bright yellow umbilicated incrustations. These incrustations, generally, have a depressed centre, but they are apt to coalesce, and thus spread, and at length may cover the entire scalp, presenting a crust, which, in appearance, somewhat resembles a honey comb. The hair, in this variety of porri $\acute{g}$ o, is sickly, and generally falls out, and in rare instances, will never grow in again. The matter secreted under the crust does not run out, but will remain until it dries up, thus giving rise to putrescence that is attended with a very peculiar and disagreeable smell, compared by some to that of the leek, and by others to that of mice.

The second variety, which is not contagious, is a much more common affection than the other. In this, the scab is not depressed, but consists of an elevated or thick incrustation, which is attended with a discharge of an icterous and acrid humor, that readily inflames the surrounding parts, and thus spreads the disease very rapidly. On parts where the humor dries up readily and does not form scabs, it is followed with a scaly or bran-like appearance. The parts around the ears, the face, and the neck are also liable to be affected, but the hairy scalp is most subject to it. The glands around the ears are apt to become inflamed and swelled.

This scabby eruption generally makes its appearance first behind the ears, and spreads from this over the head.

Children affected with this variety of porri $\acute{g}$ o are apt to chafe in those parts where the skin is folded or lays in contact, as in the axilla, groin, and behind the ears.

Treatment.—It is very important in both these varieties of porri $\acute{g}$ o, to exclude the air from the parts affected. To affect this, the hair should be cut close, and a plaster of gum elastic applied. The plaster may be made as follows:

Take of Gum elastic, ...	6 ounces.
“ Bees-wax, ...	3 do.
“ Lard, ...	16 do.

Cut the gum up into fine strips, and put the whole into an earthen vessel, place it in an oven, and keep it at a temperature of 180 degrees, (or somewhat hotter than can be borne with the hand,) stirring it occasionally, until the gum is dissolved: or the vessel may be kept at the fireside for a week or two, or until the gum is dissolved.

In applying this, it is best to anoint the head with it first, and then to apply a cloth well saturated with it, all over the affected parts.

This application will disengage the scab, obviate the irritation, and prepare the parts for the healing process. In the mean time, the patient should take enough of the extract of mandrake to keep the bowels gently open.

The parts may now be washed off with a solution of saleratus; or if astringents may seem to be required, a strong tea of the astringent tonic should be used. After this the head or parts affected should be well anointed with Well's ointment for scrofula, and a soft or pliable cloth, well saturated with it, should be applied, and renewed once in 24 hours.—Should the disease not readily yield to this treatment, a full dose of the extract of mandrake, and if necessary an emetic should be given, and the head, after washing it well with an astringent and alkaline wash, should be again covered with the gum elastic paste, which should be left to remain 24 hours. After this the parts may be healed up either with Well's ointment, the stramonium ointment, or an ointment made by boiling together equal parts of tar and hogs lard, in a kettle of water.

This treatment will generally be found effectual in all the varieties of porrigo.

SCROFULA.

(*Cachexia Scrophulosa.*)

Scrofula or *kings evil*, as it is sometimes called, is a constitutional disease, which, however, chiefly affects the glandular system, especially the conglobate glands. The disease is

most common among children, and rarely makes its appearance for the first time, after the body has attained its full growth. It is supposed that the disease is chiefly hereditary, and is first developed by a depraved condition of the nutritive functions, that the disease of the glands is a secondary effect, and that it is therefore not exclusively entitled to the name *scrofula*. Under this impression, physicians consider a great variety of chronic and difficult diseases, such as cancer, pulmonary tubercles, white swelling, &c., as being more or less influenced by a scrofulous taint of the system.

The symptoms which are usually considered to indicate the presence of scrofula, are the following:—Slight inflammation and swelling of the wings or outer cartilages of the nose; swelling of the glands of the neck, which, though, they increase gradually, at length become hard,—of an irregular shape, and painful. The color of the skin over the glands is scarcely changed, but the protuberance or swelling is, sometimes, so great as to constitute considerable deformity, and to interfere with the movement of the head, and with swallowing, or even to prevent opening the mouth. After having remained in this situation for an uncertain period, the tumors may disappear. Such, at least, is usually the case, in the growing subject, and it is the most favorable termination; but in young children they more frequently proceed to suppuration. The tumors soften, are painful, and fluctuation is perceptible; the skin, covering them, becomes red and bluish, and ultimately opens, giving issue to a puriform fluid, which is usually of a thinner kind than that from phlegmonous abscesses; and is mixed with pieces of white substances resembling curds. The irregular wound, resulting from the spontaneous opening of the abscess, heals with difficulty, and the resulting cicatrix often constitutes an unsightly deformity. Where the scrofulous *vice* tinctures the organism deeply, the scrofulous inflammation first affects one gland, and then another, and ultimately the individual may die of consumption, or mesenteric disease.—(*Rostan.*)

In determining as to the existence of scrofula, the practitioner must bear in mind that simple tumefaction of the glands in the neck or any other part of the body, considered alone, is not sufficient evidence of the disease. These may become inflamed and enlarge in healthy constitutions, from the ordinary causes of inflammation. Moreover, there are several other specific diseases, that give rise to swelling in the conglobate glands. We have an example of this character in mumps (*parotitis*;) and in the presence of ulcers, or injuries in the extremities, the glands situated between them and the

trunk of the body soon become inflamed, and enlarge. Evident symptoms of constitutional derangement, connected with the local symptoms, can alone be considered true diagnostics of the disease.

Treatment.—In the treatment of scrofula, such a course must be adopted as is calculated to effect a permanent change in the condition of the nutritive and secretive functions.—For this purpose, the general system must be well relaxed and thoroughly cleansed. The stomach must be kept in order by the use of lobelia emetics; the capillary system, by the use of sudorifics, or diaphoretics, and the baths; the bowels,—glandular and lymphatic systems, by the use of mandrake extract, alterative syrup, laxatives, and other depuratives and detergents.

The emetics and baths, must be administered once twice or three times a week, as the obstinacy of the case may require. In the mean time, the patient should take the alterative syrup, three times a day, in doses large enough to keep the bowels loose. Should there be difficulty in keeping the bowels in this condition, the common cathartic powders, pills, or mandrake extract may be taken, occasionally, with the syrup.

Local treatment.—The tumor in the indolent state, may often be discussed by accompanying the general treatment with local applications. An ointment, made by mixing together equal parts of the stimulating liniment and Wells' ointment for scrofula, should be rubbed on the tumor, and a plaster of it laid over the whole of the swelled gland. This application should be alternated with a stimulating and relaxant poultice, every second day. But if the tumor, in spite of this treatment, should proceed to suppuration, it must be treated after this, in the same manner that is proper for an occult or open scrofulous tumor.

When the tumor is open, it must be well washed out, first with soapsuds, and then with a strong astringent tea, made of bayberry, cranesbill, pond lily, and sumac bark. After this, Wells' ointment should be applied, and worn over the sore, renewing it morning and evening, until it is healed. At the dressings, the sore must always be well cleansed with astringent or alkaline washes, as the case may require. The solution of chloride of soda or lime, should occasionally be used as a wash, especially if the sore is very foul.

When the sore is very indolent and difficult to heal, a powder of equal parts of cayenne pepper and mandrake root may

occasionally be sprinkled on it. For this purpose the tincture of myrrh is also very good.

Regimen.—Nothing is more important in the treatment of scrofula, than proper attention to the diet and general habits of the individual. Fat meats, gravies, rich pies, &c., should never be eaten by a patient of scrofulous habits. Pork is particularly injurious, being peculiarly calculated to favor the scrofulous diathesis. Indeed, it is supposed by many that the disease, in the majority of instances, is brought on by the use of swine flesh, either directly or indirectly through the parent. It is even true that the name of the disease comes from *scrofu*, the latin name of the hog; but this is in consequence of the disease having so near a resemblance to the common throat disease of that animal.

Vegetables constitute the best food for patients of scrofulous habits. Free exercise in the open air, is also very important. Alcoholic drinks must be sedulously avoided.

SCURVY.

(*Scorbutus.*)

The scurvy is a very distressing disease that is characterized by extreme debility; emaciation; pale and bloated countenance; "spongy gums; livid spots on the skin; offensive breath; œdomatous swellings in the legs; hæmorrhages; foul ulcers; fœtid urine; and extremely offensive stools. The scurvy is a disease of a putrid nature, much more prevalent in cold climates than in warm ones, and which chiefly effects sailors, and such as are shut up in besieged places, owing, as is supposed, to their being deprived of fresh provisions, and due quantity of acescent food, assisted by the prevalence of cold and moisture, and by such other causes as depress the nervous energy, as indolence, confinement, want of exercise, neglect of cleanliness, much labor and fatigue, sadness, despondency, &c. These several debilitating causes, with the concurrence of a diet consisting principally of salted or putrescent, food, will be sure to produce this disease. It seems, however, to depend more on a defect of nourishment, than on a vitiated state; and the reason that salted provisions are so productive of the scurvy, is, most probably, because they are drain-

ed of their nutritious juices, which are extracted and run off in brine. As the disease is apt to become pretty general among the crew of a ship when it has once made its appearance, it has been supposed by many, to be of a contagious nature; but the conjecture seems by no means well founded.

"A preternatural saline state of the blood has been assigned as its proximate cause. It has been contended, by some physicians, that the primary morbid affection in this disease is a debilitated state of the solids, arising principally from the want of aliment. The scurvy comes on gradually, with heaviness, weariness, and unwillingness to move about, together with dejection of spirits, considerable loss of strength, and debility. As it advances in its progress, the countenance becomes sallow and bloated, respiration is hurried on the least motion, the teeth become loose, the gums are spongy, the breath is very offensive, livid spots appear on different parts of the body, old wounds which have been long healed up break out afresh, severe wandering pains are felt, particularly by night, the skin is dry, the urine small in quantity, turning blue vegetable infusions of a green color; and the pulse is small, frequent, and, towards the last, intermitting, but the intellects are, for the most part, clear and distinct. By an aggravation of the symptoms, the disease, in its last stage, exhibits a most wretched appearance. The joints become swelled and stiff, the tendons of the legs are rigid and contracted, general emaciation ensues, hæmorrhages break out from different parts, fœtid evacuations are discharged by stool, and a diarrhœa or dysentery arises, which soon terminates the tragic scene."—(*Hooper.*)

What is called *land scurvy* or that form of the disease that occurs on the shore, or where the individual is not exposed to the various remote causes, as above enumerated, the disease is always more mild. Blotches with scaly eruptions on different portions of the body, a sponginess of the gums, and debility, are among the most prominent symptoms observed in these cases.

Treatment.—The cause of scurvy, very clearly indicates the course that should be adopted in the treatment. In the first place, the patient should be placed in an airy and comfortably warm apartment. This being done, the entire surface ought to be well washed off with a wash made by stewing an ounce of the best cayenne pepper in a pint of good vinegar. In the meantime, the following preparation, which is an excellent stimulating and astringent tonic, should be taken:

Take of cayenne pepper,.....	1 ounce.
“ Bayberry,.....	2 ounces.
“ Golden seal,.....	2 do.
“ White sugar,.....	6 do.

Pulverize and mix. A table spoonful of this may be scalded in a quart of water, and the tea may be drank, first in small and frequent doses; but afterwards it is best to take it in wine glassful doses three to four times a day.

The bathing with the vinegar and pepper, should be practiced once every day. The bowels must be well cleansed and regulated by the use of enemas, as the case may require.

The cholera syrup and tincture of myrrh, are excellent articles in scurvy, and should be used in connection with the other means. Charcoal has been found especially advantageous in cases in which strong symptoms of putridity prevail. But for this purpose, the pyroligneous acid is better than any other article that can be used. This article should be freely used throughout the treatment.

When the gums are very spongy and sore, it is a good plan for the patient to hold an infusion in the mouth for a few minutes three or four times a day, made by scalding some sumac berries in water. For this purpose the tincture of myrrh, tincture of cayenne pepper, and a tea of the astringent tonic are also very useful.

Regimen.—In no disease is the success of the treatment more dependant on the diet than it is in scurvy. Salted meats and oily substances, must be entirely abandoned; and the patient should make up his meals, as much as possible, of vegetables: or if meat is used, it must be fresh and lean. Vegetables of the cruciferous tribe, as mustard, cresses, radishes, horseradish, cabbages and turnips, used as food and medicine, seem particularly indicated in this disease. The scurvy-grass has always held a high character for its virtues in the cure of the scurvy.

Potatoes, tomatoes, ripe fruits, &c., are all good, and may be used as food, in proper quantities.

SMALL-POX.

(Variola.)

“Small-pox—like measles—is an eruptive fever, propagated by contagion, running a definite course, and, as a general rule,—to which, indeed, the exceptions are extremely rare,—affecting persons but once in the course of life. Its origin is lost in antiquity, and the common opinion is, that in these days, it never arises except by contagion; yet there is reason to believe, that under an exceedingly unfrequent catenation of causes, it may be engendered. It must have originated in the first instance, from common causes, and it would be very strange if the circumstances that gave rise to it then can never now recur.”

The disease is divided into two distinct varieties, viz: the *distinct* and *confluent*. In the former, distinct, elevated, distended, and circular pustules are scattered over the surface of the body; and in the latter, the pustules are exceedingly numerous, depressed, irregularly circumscribed, and confluent or joined. But as there exists no essential difference between these varieties, the division is altogether arbitrary. We find that in the same case, on some parts, the pustules are distinct, while on others, perhaps the face or breast, they are quite confluent.

Symptoms.—In from seven to twenty days after the exposure, the patient experiences a sense of languor, weariness, aching pains in the back and lower extremities, slight creeping chills, with flushes of heat, and pain in the forehead, when more or less nausea and vomiting, thirst, tenderness of the stomach, and soreness of the fauces rapidly supervene. The eruption now makes its appearance, first on the face, neck and breast, then, on the following day, it is seen on the other parts of the body. On the *first* and *second* days of the eruption, being about the *fourth* or *fifth* of the fever, the inflamed points are papular, small, hard, globular, red, painful, separate and distinct from each other, the interstices being of the natural color and appearance. On the *third*, *fourth* and *fifth* days, they become vesicular, containing a little yellowish fluid, and the interstices become red.

“During the *sixth* and *seventh* days the variola assumes a very peculiar character; it consists of concentric rings, of which the exterior and interior are opaque and pustular; the

intermediate one vesicular, and still transparent; it may therefore be denominated *vesicular-pustular*. It is further distinguished by a *central indentation*, and a *surrounding areola of rose-colored inflammation*, which frequently coalesces with those of adjacent pustules, when the eruption is numerous."

About the *eighth* day, the eruption is perfectly pustular, and the central indentation remains. On the *ninth* and *tenth*, the pustules become orbicular, and are filled; and finally, on the *eleventh*, *twelfth* and *thirteenth*, the pustules break or burst, and scabs are formed. This description applies to the *distinct* variety; the *confluent* are more severe, and the appearance of the pustules are different, according to their number; when very numerous, they give a uniform appearance of redness to the surface between the heads of the pustules.

The fever generally runs pretty high as the eruption is developed, and in the *confluent* variety, there is sometimes much delirium, or coma.

The febrile symptoms, in the latter variety, not unfrequently assumes a typhoid character, and a horrible putrefaction may follow.

The sequela of small-pox are various, and sometimes very distressing. Chronic cutaneous affections, protracted ulcers, necrosis, inflammations of the eyes, mouth, throat, ears, head, and lungs; dropsies, epilepsy, mania, paralysis, and many other distressing evils, sometimes result from small-pox.

The diagnosis of small-pox, after the eruption appears, is not difficult, and before this, it matters not, as the treatment does not vary from that of the same symptoms in other affections.

When the fever is mild, and the strength of the patient keeps up, and if, moreover, the color of the eruption keeps of a bright red, there is not much danger. But if the fever runs very high, and there is much delirium, the danger is considerable. When there is a disposition of a typhoid character, and the pustules turn dark or black, and the strength fails suddenly, the case is almost certain to terminate in death.

Prevention.—Vaccination seems to be an effectual prophylactic against the small-pox, provided that the vaccine matter be genuine, and produces its constitutional impression on the subject. The blessings of vaccination, although known before, were introduced to popular favor, by Dr. Jenner, and he, like the authors of other valuable discoveries, met with the usual opposition and persecution attending all innovations on old and established doctrines and practice. Small-pox, when genuine, generally occurs but once during life.

Vaccina or cow-pox, as it is called, seems to be attended with the various characteristics of small-pox, only that it is incomparably more mild. The number of pustules is not generally any greater than that of the insertions of the matter, although rare instances have occurred, in which a number, or even a considerable crop has been produced. The vaccine matter as the name (*cow-pox*,) indicates, is derived from the cow.

VARIOLOIDES—MODIFIED SMALL-POX.—“Soon after the general introduction of vaccination, exanthematous affections closely resembling small-pox, were occasionally observed in individuals who had previously undergone the vaccine disease in a regular and satisfactory manner. These *varioid* affections became more and more common; and within the last fifteen years, they have appeared in various countries, in frequent and extensive epidemics. In the earlier periods of vaccination, these eruptions were generally regarded as *chicken-pox*; but subsequent inquiries lead to the opinion with many, that they are the product of a *peculiar* contagion, acting on systems but partially protected against small-pox by previous vaccination; and this appears now to be the general opinion.

From the earliest times of small-pox, of which we have any records, this disease has indeed been frequently noticed under various modifications, as remarkable and apparently as distinct as the form we now call varioid. We find various irregular forms of the disease described by the early writers under the names of the vesicular, pustular, and spurious small-pox; swine-pox, sheep-pox, stone-pox, horn-pox, &c., &c., all of which were regarded as having but one origin, namely, variolous contagion. After small-pox inoculation was introduced, spurious variola was by no means uncommon; and it has always been observed that genuine and spurious small-pox have in the same epidemics come in and gone out together, in the same manner as they have been uniformly observed to do since vaccination has been introduced.

“It appears, therefore, that various circumstances, either of a constitutional or accidental character, may modify small-pox in a variety of ways; and as such modifications were abundantly observed before vaccination was practiced, we need not be surprised that they should be so frequent now, when a new and very extensive modifying cause exists in the influence of the vaccine disease. That the present varioid disease is in fact nothing but a modified form of small-pox, may be regarded as established by an abundance of direct and conclusive evidence.”—(*Eberle*.)

The disease has many of the symptoms common to the genuine small-pox, but they are invariably more mild. Varioloides usually occurs but once during life.

The following particulars may be regarded as among its most prominent characteristics:

1. The eruption appears in clusters, occurring usually from the second to the fifth day.

2. Unlike the small-pox, the eruption seldom or never enters into complete suppuration.

3. Excepting in very violent cases, the eruption is seldom attended with much fever; and the desiccation or scabbing, invariably occurs much earlier than in small-pox, and instead of inclining to leave pits or depressions, the scabs leave rather an elevated disk or tubercle of a red appearance.

Treatment.—On the proper treatment of small-pox, the profession has for many years been much divided. The great question has always been on the comparative merits of the *stimulating* and the *anti-phlogistic* plan. But it is unnecessary here to give a detail of the various arguments that have been adduced on either side. It is sufficient to know that we may expect to be successful in our remedial applications, only when we operate in concert with the *vital powers*, for when these give way, the "*chance is over*," and all medicine is useless. To sustain and promote vitality, then, is the only rational plan of treatment in any case.

When the fever runs high and the skin is dry and husky, (a condition unfavorable to the natural developement of the eruption,) the body should be sponged with cold water, while the other usual means applied in fevers are instituted. Lobelia, thoroughwort, saffron, seneka snakeroot and black cohosh, are all valuable here. Should it be needed, the lobelia may be pushed to the extent of emesis. It is always comfortable in fevers, to have the air rather cool and the skin moist, and this seems especially favorable in small-pox. The patient's room should not only be kept cool, but well ventilated, and his surface should be daily sponged with tepid or cool alkaline washes, or lime water. The skin should be kept relaxed and the determining powers to the surface.

In confluent small-pox, when the patient inclines to a typhoid condition, stimulants and tonics must be freely used, such as cayenne pepper, ginger, compound tincture of myrrh, brandy, wine, columbo, gentian and poplar bark.

About the time that the pustules are filling, the circulation should be well sustained with light nourishing food and stimulating medicine, thus to prevent the *pitting* or *pock-mark*; and

with a view to this, the patient should be well guarded against picking and scratching the pustules, which all have a disposition to do, owing to the intolerable itching that attends the drying up of the pustules.

Tonics are required during recovery.

SPRAINS.

(*Subluxatio.*)

Sprains result from accidents, and usually occur about the joints, especially at the ankles and wrists. They are attended with considerable pain, swelling, redness, and sometimes a yellow or dark green color of the skin. The ligaments of the joints are sometimes considerably injured; and when this is the case the parts are generally slow to recover.

Treatment.—Some physicians recommend the application of cold water, by pouring it from a considerable height on the injured part. If this course is taken, the skin, after the application, should be dried and well rubbed with a towel, and then a coat of the stimulating liniment, or the bathing drops, or opodeldoc ought to be freely applied.

If the part is very painful, it may be steamed over a pot of bitter herbs, applying or laying the hot herbs over the sprain, while the hot water is regularly poured over them.

An application of bruised poppy, or jimson leaves will be found very excellent to assuage the pain.

The fomentations and liniments should be applied frequently, or as the case may require.

Sometimes a relaxing poultice made of lobelia, slippery elm, and cayenne pepper will be found very advantageous.

ST. ANTHONY'S FIRE.

(*Erysipelas.*)

Erysipelas is a febrile affection, attended with diffusive cu-

taneous inflammation on some part of the body, characterized by redness, burning, heat, swelling, and vassication.

Symptoms.—Previously to the development of the local symptoms, there is almost universally more or less morbid movement in the general system. The digestive organs are usually impaired; there is loss of appetite, a furred tongue, sometimes nausea and headache, and often a considerable oppression in the region of the stomach. After these symptoms have appeared for an indefinite length of time, the eruption will make its appearance, sometimes preceded with a paroxysm of fever.

The inflammatory eruption comes out in the form of an irregular stain or diffused blotch, which has a disposition to enlarge rapidly. Small vassicles generally appear about the third day, which are filled with a yellowish serum. The eruption sometimes assumes a latent form, and seems to become chronic. There is usually more or less swelling of the parts; and this often becomes considerable. When the disease attacks the face, the eyes are often closed by the swelling, and the entire countenance becomes so disfigured by the tumefaction, that it not unfrequently happens that the patient's best acquaintances will not know him.

Although the dermoid texture (that of the outer skin,) is most subject to erysipelas, yet the inflammation is known sometimes to penetrate deeply into the body, or even to affect the surfaces of internal organs.

Erysipelas assumes various degrees of violence, and presents different characteristics, which are however all owing to the idiosyncrasy of the patient—the condition of the atmosphere—the state of the system at the time of the attack, or the character of the treatment.

These varieties have been severally called the *erratic*, the *suppurative*, the *ædematous*, and the *gangrenous* erysipelas, according to the character and termination of the disease.

Among the various circumstances and causes that tend to produce erysipelatous inflammations, the following might be named; 1, sudden transition from warm to cold atmosphere; 2, local irritants; 3, general depraved and corrupt condition of the humors; 4, maltreatment of other diseases; 5, constitutional predisposition.

It is not a very difficult matter to distinguish this, from other forms of disease. The local symptoms are generally the most unequivocal diagnostics. The redness and swelling of erysipelas, is generally attended with an intolerable itching and burning. The eruption differs from that of scarlet fever,

in its more marked phlegmonous character, and from that of measles, by its diffusion, and the abruptness of its margins.

When the disease is of the erratic or wandering character, it is comparatively mild and without danger. When the redness disappears, and is followed by the natural color of the skin, and the fever subsides, the disease may be expected to terminate by resolution; and even when it terminates by suppuration, it is not considered dangerous, although it is very distressing; but when the skin in the œdematic or any other variety, turns purple or dark, and the swelling becomes soft, gangrene is apt to supervene, and carry off the unfortunate sufferer.

Treatment.—The indications in the treatment of erysipelatous inflammation, are about the same as in other violent inflammations; prompt relaxation, evacuations, and tonics are required.

When the case is a severe one, the patient should be immediately thrown under the relaxing power of lobelia or thoroughwort, and this should be aided with the warm or vapor bath to equalize the circulation, which, when it is affected, will subdue the erysipelas. If the case be treated before vesicication takes place, the external application should consist of equal parts of the alcoholic extracts of Peruvian bark, lobelia, mandrake root, jimson leaves, and cayenne pepper; these should be mixed up into a suitable form for application, either by the use of elm mucilage, or lard, and applied to the affected parts. After vessication the external means should consist of the same kind of an application, made of the extract of thoroughwort, oak bark, and jimson leaves, prepared as before, and applied. When suppuration takes place, the parts must be treated as in other cases of suppuration.

Poultices, applied to erysipelatous parts, are sometimes of considerable benefit; these should consist of slippery elm, thoroughwort, &c. It should ever be borne in mind that the *relaxing means* must be thoroughly and unremittingly applied, until the inflammation subsides. Diaphoretics are also of great advantage. The evacuants should consist of sudorifics, gentle emetics, and mild cathartics. It must, however, always be remembered, that irritating substances are not admissible as internal means, especially those among the cathartic class; as the disease is very susceptible of metastasis. Attention to diet is necessary.

ST. VITUS' DANCE.

(Chorea.)

This singular disease consists of an affection of the nerves, giving rise to irregular and uncontrollable jerking or twitching of the muscles of parts, or even, in rare cases, the entire body. "It has been called St. Vitus' dance, because some devotees of St. Vitus exercised themselves so long in dancing, that their intellects were disordered, and could only be restored by dancing again at the anniversary of St. Vitus." The disease most commonly effects only one side at a time, particularly the arm and leg.

When chorea effects the muscles of the face, it gives rise to quite a variety of the most strange and fantastical grimaces and contortions.

When any motion is attempted to be made, various fibres of other muscles act which ought not; and thus an effect contrary to that intended, is produced. The disease is chiefly incident to children and young persons, of both sexes, seldom occurring for the first time, after the age of puberty.

The intellectual faculties are seldom affected in this disease; but it has been stated that when the affection is very severe and of long standing, more or less injury of the mind has been experienced.

Chorea may arise in debilitated habits, from any cause that produces protracted nervous irritation. The irritation occasioned by the presence of worms, and that attending teething, &c, may be named among the exciting causes of the disease.

Treatment.—The cure of chorea, may generally be effected by taking, in connection with a strong tea of the nerve tonic three or four times a day, the following preparation:

Take of Black cohosh,.....	2 ounces.
" Sculcap, ...	1 ounce.
" Assafoetida,.....	½ do.

Pulverize and digest in a pint of alcohol for six days, and pour off the tincture carefully. The dose is a teaspoonful once in three hours.

The good effects of the above are made more sure by taking some pills, made by rolling equal parts of lobelia and skunk cabbage root, in fine powder, with the extract of blue cohosh,

or of lady slipper. The dose of these is from one to three, two or three times a day.

Bathing.—The shower bath is an excellent auxiliary to the other means in this disease. The patient should take a showering at least once a week, but would do much better to take one every day. After the bath, the skin must always be well dried and freely rubbed with a coarse towel.

Cathartics.—Cathartics have been found of considerable utility in this disease; but the articles used of this class must be mild and unirritating. Usually, however, it is only necessary to keep the bowels open by the use of laxatives.

SUSPENDED ANIMATION.

(*Asphyxia.*)

It is known that when oxygen, the supporter of physiological* as well as chemical combustion, is excluded from the lungs, that all the vital functions will cease. This condition of the body is now called asphyxia. Formerly the term was restricted to diseases of the heart; or rather, it was used to designate those affections that were characterized by suppression or want of pulse.

Asphyxia may be caused by any thing that will obstruct the passage of atmospheric air to the lungs. The common causes of the difficulty, are *drowning, strangling or hanging, irrespirable gases, &c.* These will receive a short notice separately.

DROWNING.—When a person is submerged or falls into water, the instinctive motions of respiration are continued, but as the irrespirable fluid is drawn into the windpipe, the irritation produced by its presence, gives rise to spasm in the muscles of the glottis, and thus the passage is instantly closed up; and in this way we may account for the fact that water is never found in the lungs of persons recently drowned. It is,

* The term '*physiological combustion,*' is here used to express that phenomenon that is evinced in the union of oxygen with the elements of the blood. That the common and essential characteristics of open and free chemical combustion are not here to be found, it is not argued by any means; although the phenomenon seems to be much modified by the laws of vitality. See remarks on fever, page 66; also—inflammation, page 122.

however, generally the case that a frothy mucus is found in the air cells or bronchial tubes, which, by most pathologists, is supposed to be dependant on the presence of water. It is not improbable that although the trachea is very sensitive to the irritation of water or any other foreign substance, yet during the few first inspirations more or less may be drawn even into the lungs, and then by the coughing excited, the most of it be forcibly expelled, while the spasmodic contraction at the glottis, which by this time has become permanent, prevents the further admission of the fluid. It is remarkable, that it is also seldom the case that water is found in the *stomachs* of those recently drowned.

It is very certain that unless the submersion is attended with violence, as contusion, &c., sufficient to occasion death more quickly than it would take place in consequence simply of submersion, that the death is always occasioned by the absence of the atmospheric air or oxygen from the lungs.

STRANGLING OR HANGING.—It has been supposed that in cases of asphyxia from this cause, the mischief is occasioned by the obstruction produced to the circulation in the large vessels of the neck,—that from engorgement in the venous system, a fullness or hyperæmia in the brain is occasioned, which, giving rise to apoplexy, in this way brings on death. But this is a mistaken idea, for although the venous circulation through the jugulars and other superficial vessels in the neck, is totally obstructed, and notwithstanding a considerable hyperæmia of the vessels of the brain is produced, yet it is certain from the results of observation and experiment, that this is not generally the cause of the death, in strangulation. In this, as in other causes of asphyxia, this event follows as the common result of the exclusion of the atmospheric air or oxygen from the lungs.

ASPHYXIA BY IRRESPIRABLE GASES.—These gases produce death either negatively by their want of support to respiration, or by their occasioning a spasmodic closure of the glottis and thus preventing the entrance of the atmosphere, or oxygen, the only supporter of respiration. The gases that are especially mischievous in this respect, are not very many, among the most prominent, are carbonic acid gas, ammoniacal gas, muriatic acid gas, deutoxide of nitrogen, and chlorine.

Among the less frequent causes of asphyxia, are mechanical hindrance to the expansion of the chest, as in tight la-

cing &c.; smothering; tumors in the chest; and the congenital causes.

General symptoms, &c.—The symptoms attending asphyxia, although about the same whatever be the character of the mechanical cause, must nevertheless be expected to vary according as the supply of oxygen is diminished, or totally withheld. But the following description by Dunglison, will hold good in the generality of cases:

“When the access of oxygen is in a manner prevented, a few seconds elapse before any uneasiness is experienced; but after this, a marked feeling of distress indicates the necessity for satisfying one of the most imperious wants—that of respiring—the *besoin de respirer*. This feeling soon becomes insupportable; the animal gasps, and yawns repeatedly, and makes use of every effort to obtain a supply of the indispensable fluid. The whole body is agitated. The limbs quiver, and are convulsed, or thrown into tetanic spasms. Almost instantaneously, especially if respiration has been slightly practicable, and the supervention of asphyxia therefore gradual, the feeling of distress is attended by vertigo and stupor: the face becomes livid, especially the lips, and the orifices of the mucous membranes; and, at times, the whole surface becomes of the same hue. The sensorial functions are suspended in a few moments: and, almost simultaneously, the muscles lose their power of contraction, so that the individual falls. In this state of apparent death, an obscure circulation alone exists in the great vessels, whilst the functions of the capillary system continue. The præcordial region presents, at times, a dulness on percussion, which extends as far as two inches to the right of the sternum, and three inches above the space usually occupied by the right heart. This dulness is owing to the engorgement of the right cavities. (*Piorry*.) Soon the circulation ceases, first of all in the larger vessels, and afterwards in the capillaries; and, with this cessation, the functions of secretion, nutrition, and calorification are arrested. The asphyxia has now become positive death.

“Examination of the body after death exhibits general lividity of the surface, and the face more especially. The parenchyma of the different organs is filled with fluid, especially that of the liver—which is sometimes quite purple—of the spleen, kidneys, and lungs. The whole capillary system, indeed, is surcharged with blood of a dark color, which is described by some writers as always fluid, (*Adelon*;) but to this there are many exceptions. (*Berard*.) The blood appears to be wholly collected in the pulmonary artery, the right side of the

heart, and the venous system generally, whilst the pulmonary veins, the left cavities of the heart, and the arteries are empty, or contain but a small quantity of fluid. The appearances, however, differ somewhat, according as the respiration is at once obstructed, or has taken place, although imperfectly for a time. In the former case, death ensues more promptly, and there is less suffering; and, on examination, the cutaneous capillaries and the various organs are less charged with blood, and the fluid is less exclusively collected in the venous system."

The pathological condition giving rise to the livid or dark appearance of the countenance and other parts of the body, and the distortion of the features, will not always insure these phenomena for any considerable time after death. For it is often, if not generally the case, that the countenance assumes its natural appearance; and it is even said that not unfrequently there is quite a pacidity of expression—a "*rapture of repose*" giving a singular contrast with the previous appearance. Nevertheless, it is sometimes the case, especially when there is mechanical obstruction in the superficial vessels, as in hanging, that all the horrible appearances attending asphyxia, are continued long after death. This condition of the dead body is graphically described in Shakespeare's lines on the frightful physiognomy of Duke Humphrey:

"But see! his face is black and full of blood;
His eye-balls further out than when he lived,
Staring full ghastly like a strangled man;
His hair uprear'd; his nostrils stretch'd with struggling:
His hands abroad display'd, as one that grasp'd
And tugg'd for life, and was by strength subdued."

Treatment.—In the treatment of cases of suspended animation, the great object should be to bring about that condition of the body most favorable to the performance of the physiological or vital functions, as respiration, circulation, calorification, &c. The first thing, therefore, that should be done, is to remove the subject from the influence of the cause or causes of the asphyxia. This being done, the body, if wet, should be immediately dried with the use of a towel or dry cloth, and then a course of the most lively friction must be instituted with the use of the rubefacient oil, bathing drops, tincture of cayenne pepper; or if none of these are convenient, the dry hand should be used. In the mean time, efforts must be made to get down some permanent diffusive stimulant, as the anti-spasmodic tincture, tincture of cayenne pepper, or myrrh,

&c. Enemas, as warm as could be borne by a healthy subject, composed of the same permanent and diffusive stimulants, must also be frequently administered.

By this time the preparations for a vapor bath may have been instituted, so that the patient may now be surrounded by a vapor of moderate heat. The precaution must, however, be observed, not to deprive the face of fresh and circulating air. The vapor should, for a few moments, be kept at a temperature of only about 100 degrees, or about that of the body of a healthy man; and then it may be gradually raised as the circumstances may seem to require.

Artificial inflation of the lungs, has ever been regarded as a very important means of resuscitation. The inflation is generally made by forcing the air into the mouth through a tube, or by means of a common bellows, whilst the nostrils are held close, to prevent the return of the air through them. The air must, however, be forced in very moderately, and time should be given for it to pass out alternately with the inflations. The process may also be favored by placing the hand on the breast or abdomen, and gently pressing alternately with the inspirations.

Galvanism has of late been found very useful in those cases, and if a battery is at hand, it is advisable to use the means.

TETTER.

(*Herps.*)

The term '*tetter*' has been used to designate various eruptions of different characters. But its signification is now restricted to an eruption consisting of a cluster of vesicles having inflamed bases, and being separate and distinct from each other, and the skin remaining of the natural appearance between them.

There are several varieties of the disease that come under the notice of the practitioner. The most common variety (*H. Phlyctenodes*,) may occur on all parts of the body, having no determined form or seat. It makes its appearance by a multitude of very minute red points. In the course of a few days the skin upon which these points appear, becomes uniformly red, and small transparent vesicles make their appear-

ance. These are aggregated into irregular clusters of various sizes, from a few to nine or ten inches in circumference. About the fourth or fifth day, the vesicles either burst and give exit to the included fluid, or they begin to wither and concrete into yellowish scabs, which usually fall off about the eighth or tenth day, and leave a red and irritable surface.

A variety of the disease resembling erysipelas, occurs on the body, and consists of a band of vesicles, seated on a red and inflamed surface. This band generally commences in the right illiac or lumber region, and comes forward on the abdomen, and then inclines upwards or downwards, rarely passing over the meridian line. The common name of this variety is *shingles* (*Herps Zoster*.)

Another very common variety of this affection, is commonly called *Ringworm*, (*Herps Circinatus*.) This makes its appearance on various parts of the body, and consists of circular patches of small vesicles that break in the course of four or five days, and are followed with a scaly appearance of the skin. These patches are from an eighth of an inch, to two inches or more in diameter. As these patches enlarge, their centers sometimes present the skin in its natural appearance.

Treatment.—The several varieties of tetter should be treated on the same general principles. The system should be put under the influence of mild aperients and depuratives, such as the narrow dock root, elder flowers, and dandelion root; or pills, made of equal parts of lobelia and the mandrake extract, may be used in doses of one every evening.

Local means.—An ointment, made by incorporating as much of equal parts of lobelia seed, blood root, and white vitriol (all well pulverized) as can well be mixed with a sufficient quantity of paste, made by dissolving gum elastic in lard, as directed for scall on page 194, should be worn over the eruption, until the cure is effected. The parts should be washed off with strong astringents, or alkalies, as the case may seem to require; once every day.

An ointment, made of the buds and burs of meadow fern, is also very good for tetter.

Fresh blood root, bruised and soaked in vinegar, imparts to the latter a property that proves valuable in many cutaneous affections, and is by many, especially recommended in this affection.

The various itch ointments will generally cure tetter.

TIC DOULOUREUX.

(Neuralgia.)

This is one of the most painful affections that are incident to man. It essentially consists of an intermittent pain that is seated in a nerve, and shoots along its course and ramifications.

The pain generally occurs suddenly; but sometimes a slight sensation of itching or of heat, creeping or numbness is felt in the part, which gradually becomes more and more intense, until the disease is fully established. Then again the pain is preceded by a feeling of coldness and numbness. When the disease has fully set in, the pain is usually extremely acute and lancinating, and the velocity with which it traverses the nerves, has been compared to an electric shock.

The face is more commonly the seat of neuralgia than any other part of the body.

“When the pain is at its height, it seems as if burning needles were thrust into the affected parts. After a time the agony diminishes, and is alternately replaced by a sense of numbness, which remains until the pain recurs. Exacerbations and remissions of pain take place at intervals until ultimately the pain becomes endurable, which it scarcely was at the height of the paroxysm.”

It is obvious that a disease so *painful*, could not long exist without affecting the general system. Sleep is driven away; general restlessness sets in; digestion is poorly performed, and if the patient is not relieved, the system will become worn down, and in the worst cases, death not unfrequently occurs in the course of a week or two.

Treatment.—The pain may generally be removed by the use of the rubefacient oil, in which half its weight of gum camphor is dissolved. This preparation must be applied to the affected parts with thorough and continued friction. In rubbing on the liniment, the ends of the fingers should be drawn along the course of the pain with considerable pressure. In the mean time, lobelia should be taken in nauseating doses. It is the best plan to form some of the pulverized seed into pills with the lady slipper root, and then to give them once in three hours in nauseating doses.

The bathing drops will sometimes answer instead of the rubefacient oil, and it happens occasionally, that the pain may

be readily relieved by the use of the rubefacient solution.

Hot fomentations of bitter and relaxing herbs, have also been found useful.

The vapor bath should be applied, together with emetic doses of lobelia, if the pain does not yield to the other means recommended; and these should be repeated daily, in extreme cases, until the disease will yield.

The nervine tonic should be used during the entire treatment, whatever may be the other means employed.

TOOTHACHE.

(*Odontalgia.*)

This very troublesome complaint is very common, and needs no description, only as to some of its pathological conditions.

The pain commonly called toothache, is not always caused by caries of the teeth. Inflammation of the alveolo-dental membrane often gives rise to extreme pain, when the teeth may be sound. Ulcerations may occur in the sockets of the teeth from inflammations of this membrane, and the pus be discharged between the gum and the teeth; and sometimes the matter, not finding vent, will remain and give rise to a carious condition of the bones, and thus keep up a fistulous ulcer. The soft parts within the jaw bones, may also become inflamed, and cause what is commonly called the "*jaw-ache.*" This latter generally passes off by resolution. However, in the majority of instances, the pain arises from caries of the teeth. The crown of the tooth is most commonly affected, but it sometimes happens that its fangs or roots commence to decay first. In this case the symptoms do not differ much from those that characterize inflammation of the membranes, only that the difficulty lasts longer, or assumes more of a chronic form. When the crown or top of the tooth is affected with caries, it seems that the disease commences on the outer edge of the bony part, immediately under the enamel. Carious parts are generally discovered by the painful sensation caused by the contact of cold or hot drinks,—by the touch of sugar, or other saccharine matter, before it can readily be seen on examination. The rotting of the tooth, generally commences in a small point, and continues thence, until the whole crown is decayed away. The bony part goes first, and after-

wards the enamel or remaining shell is broken down either by an effort at extraction, or by chewing hard substances.

Treatment.—In cases of inflammation of the membranes, which may be known by the absence of caries, by the pain affecting a number of teeth at the same time,—by the affected teeth seeming loose, and longer than the rest,—by the swelling of the cheeks, and the ulceration of the gums, the external treatment should consist of a course nearly the same as that recommended for glossitis, only it may be milder in the commencement. The teeth should not be extracted in cases of inflammation of the membranes, unless it becomes necessary to do it when ulceration takes place, in order to give vent to the pus.

In cases of toothache from caries, the pain may be relieved by the introduction of a little oil of cloves, cinnamon, summer savory, or some kreosote, which may be done by means of a little bit of cotton or lint. When the pain is relieved, the tooth should be cleaned out and plugged up with a metallic substance, such as tin, silver, or gold foil. But when the tooth is so far decayed as not to be of much service, it should be extracted.

The rubefacient oil, or bathing drops, applied with considerable friction, will often give relief in toothache as well as jaw-ache. Some advise destroying the nerve, and for this purpose, the introduction of a hot wire, or caustics, such as the carbonate of potash, &c., if well done, will generally be successful.

ULCERS.

(*Ulcera.*)

Ulcers are open, fœtid, chronic sores, which have the following description by Hooper: A purulent solution of continuity of the soft parts of the animal body, arising from a variety of causes, as all those that produce inflammation, from wounds, specific irritation of the absorbents, from scurvy, cancer, the venereal or scrofulous virus, &c. The proximate or immediate cause is an increased action of the absorbents, and a specific action of the arteries, by which a fluid is separated from the blood upon the ulcerated surface. They are

variously denominated; the following is the most frequent division:

1. The *simple ulcer*, which takes place generally from a superficial wound.
2. The *sinuous*, that runs under the integuments, and the orifice of which is narrow, but not callous.
3. The *fistulous ulcer*, or *fistula*, a deep ulcer with a narrow and callous orifice.
4. The *fungous ulcer*, the surface of which is covered with fungous flesh.
5. The *gangrenous*, which is livid, fœtid, and gangrenous.
6. The *scorbutic*, which depends on a scorbutic acrimony.
7. The *venereal*, arising from the venereal disease.
8. The *cancerous ulcer*, or open cancer.
9. The *carious ulcer*, depending upon a carious bone.
10. The *inveterate ulcer*, which is of long continuance, and resists the ordinary applications.
11. The *scrofulous ulcer*, known by its having risen from indolent tumors, its discharging a viscid, glaring matter, and its indolent nature.

The following four great distinctions between wounds and ulcers, are made by Professor Richerand: 1. A wound arises from the action of an extraneous body;—the cause of an ulcer is inherent in the economy. 2. A wound is always idiopathic;—an ulcer is always symptomatic. 3. A wound has essentially a tendency to heal, because the action of its cause has been momentary;—an ulcer, on the contrary, has a tendency to enlarge, because its cause persists. 4. The treatment of a wound is purely surgical; that of an ulcer is medical as well.

Treatment.—As ulcers, in nearly every instance, are a result of an unhealthy condition of the general system, it is a very good plan, as a common rule, to commence their treatment with such a remedial course as is calculated to obviate the various primary, and incidental causes that may obtain in the case.

To regulate the secretions, equal parts of fine lobelia, blood root, and the mandrake extract, formed into pills, may be given in nauseating doses three times a day. For this purpose, the alterative syrup is also very good.

Laxative bitters are very useful, as a general remedy, in the treatment of ulcers; they should be used throughout the treatment.

Local treatment.—One of the most important things, in the

local treatment of ulcers, is to keep the sore clean. It must be frequently washed out with soapsuds, and astringent infusions, made of the astringent tonic, bayberry, sumac bark, white pond lily, &c. After the washings, the sore should be wetted occasionally with some pyroligneous acid; or if this is not at hand, some tincture of myrrh, lobelia, or cayenne pepper may be dropped into it at the dressings.

Poultices.—Great benefit is often found in the use of poultices. The ingredients of which these should be made must be selected according to the condition of the ulcer, whether they should be astringent, relaxant, stimulating or emollient. Among the astringent articles almost any of the simples will be found to answer, but the astringent tonic, bayberry, cranesbill, sumac, and pond lily root are generally preferred. Among the relaxants, the best are lobelia and thoroughwort. Of the stimulants, ginger and cayenne pepper, made up with meal, or slippery elm bark, are generally preferred. Slippery elm, comfrey, flaxseed, and mallows are the best emollients.

Salves.—As soon as the ulcer issues healthy pus, or that which is of a thick, yellowish, creamlike consistence, the sore will be ready for the healing process. To promote this, salves are of great benefit. Either of the salves recommended among the compounds, may be used. It is sometimes best to change them, first using one, and then another.

At the dressings, the sore must always be washed out, first with soapsuds, and then with some astringent wash.

If, at any time after the use of the salves is commenced, the sore should become inflamed and painful, the emollient and relaxant poultices should be used.

The plaster recommended for the treatment of open cancers, is an invaluable application for old indolent and obstinate ulcers.

In *fistulous* and *sinuous* ulcers, it is necessary to inject the articles used, into the opening of the ulcer, by means of a syringe made for the purpose, that can be got at any drug store. In *gangrenous* ulcers, antiseptic poultices, made as directed for mortification, must be used.

When the ulcer is very indolent and slow to heal, it is sometimes very good to sprinkle some cayenne pepper or its oil, or the oil of lobelia into the sore. When there is fungous flesh in it, some fine blood root, mandrake root, burnt alum, or what is perhaps better than any thing else, a little carbonate of potash may be sprinkled on the fungous parts; and then a poultice should be laid over the whole.

VAPORS.

(*Hypochondriasis.*)

This is a very singular and distressing disease, affecting both the body and mind. It consists, essentially, of a deranged condition of the digestive organs, and functions of nutrition; thus giving rise to depression of the animal spirits, and a disturbed condition of the intellectual faculties.

Hypochondria comes on with a sense of languor, listlessness, or want of resolution and activity, with respect to any undertakings. The patient feels serious, sad, and timid; he is ever pondering on the ills and misfortunes of life; and on the slightest grounds, he suspects evil, and from the most trivial events, he takes alarm. He is particularly attentive to the state of his own health; and the smallest changes of feeling, are regarded as indications of constitutional unsoundness.—Any unusual sensation, however slight, he considers a premonitory symptom of approaching disease, if not the immediate forerunner of death. Sometimes he imagines that he is dying, or that he is actually dead; and so strong and fixed, is his notion, that he will not be persuaded out of it, however great the pains taken.

Treatment.—The medical treatment of patients affected with low spirits, should consist of such means as are calculated to improve the condition of the digestive organs. The various means, therefore, that are recommended for dyspepsia under page 120, should be instituted.

Frequent cold bathing, is particularly advantageous in this affection. Occasional emetics, tonics, and laxative bitters, are always required. The grand object is to keep the system free of obstruction, and the organs in good tone.

Moral means.—It is always a matter of the greatest importance, for the practitioner to secure the full and entire confidence of the patient. Every effort should be made to get the patient to believe that the means used will cure him; and with a view to this, some important remedy—a celebrated arcanum, must be talked of,—desires to get it, must be frequently expressed in his presence, and at the same time, doubts as to the possibility of procuring it, may be evinced. Finally, however, the great desideratum is gained,—the medicine is procured, and hence the cure will be certain. Together with

other good and prompt treatment, some mild remedy whose specific action is certain and well known, must now be given. The patient must be made to anticipate certain effects; and to be assured that if they take place, all will be well. This important remedy may be a safe but active diuretic, any innocent article that will stain the urine, or that will produce some other prominent, or remarkable effect.

Sometimes a cure may be effected, by instituting some interesting, engrossing, and absorbing scheme, as some *mining speculation*, or some important *expedition*, and thus insulating the attention and thoughts of the patient.

Travelling is very beneficial to some.

Moral and religious conversation is very beneficial, and if the patients mind can thus be engaged and engrossed, it is entirely the best plan of treatment.

Some very singular and amusing means, have occasionally proved successful. The writer has heard an instance related, of a hypochondriac patient, who lived in this country, at the time of its early settlements; and who withall, had a most horrible dread of the Indians. The chief affliction of this individual, was his belief that his legs were *glass*. He never suffered himself to be moved, and his legs must not even be handled, least by accident, they might be broken! After keeping his room for a year or longer, he was at length prevailed on to take a visit to a neighboring house, with the assurance that the care he would have, would insure the safety of the enterprise. A carriage was procured, the man with glass legs was carefully placed into it, when the driver proceeded with the greatest care. When about a mile from his home, a conversation with reference to some late depredations by the Indians, was introduced. The fears of the hypochondriac were soon aroused, so that he entirely forgot his *glass legs*. Soon they were to pass through a strip of woods, and as they drew near, the fears of the distressed man, evidently became more and more pressing. The carriage had no sooner entered the woods, when five men (*prepared for the design*) in Indian habits, with rifles and tomahawks in hand, rushed from the hillside with tremendous war-whoops, yells, and firing of their guns. One of the men in the carriage, who had risen up to make his escape, fell as dead to the ground, when the man with the glass legs leaped from the carriage and *'took to his heels'*, and the Indians after him. But the stiff-legged man left them far in the rear; he was soon at his house, in a fine perspiration.—The means were successful.

The following, from Ewell's Medical Companion, are cases that are not without interest:

"Some hypochondriacs have fancied themselves miserably afflicted in one way, and some in another—some have insisted that they were TEA POTS; and some that they were TOWN CLOCKS,—this, that he had a big belly, and that his legs were glass—one that he was extremely ill, and another that he was actually dying. But I have never heard of any of this blue devil class, whose extravagance ever yet came up to the following, which was related to me by my noble hearted old friend, the late Dr. Stevenson, of Baltimore; whose very name always sounds in my ears as the summary of every manly virtue.

"This hypochondriac, who, by the bye, was a patient of Dr. Stevenson, after ringing the change on every mad conceit that ever tormented a crazy brain, would have it at last that he was dead, actually dead. Dr. Stevenson having been sent for one morning in great haste, by the wife of his patient, hastened to his bed side, where he found him stretched out at full length, his hands across his breast, his great toes in contact, his eyes and mouth closely shut, and his looks cadaverous.

"‘Well, sir, how do you do? how do you do this morning?’ asked Dr. Stevenson, in his blustering jocular way, approaching his bed. ‘How do I do,’ replied the Hypochondriac, faintly—‘a pretty question to ask a dead man.’ ‘Dead!’ replied the Doctor. ‘Yes; sir, dead, quite dead. I died last night about twelve o’clock.’

"Quick as lightning, Dr. Stevenson caught his cue, which was to strike him on the string of his character; on which, the Doctor happily recollected he was very tender. Having gently put his hand on the forehead of the Hypochondriac, as if to ascertain whether it was cold, and also felt his pulse, he exclaimed, in doleful note, ‘Yes, the poor man is dead enough—it is all over with him, and now the sooner he can be buried the better.’ Then stepping up to his wife; and whispering her not be frightened at the measures he was about to take, he called to the servant, ‘My boy, your poor master is dead, and the sooner he can be put in the ground the better. Run to Mr. C——m, for I know he always keeps New England coffins by him, ready made; and, do you hear, bring a coffin of the largest size, for your master makes a stout corpse, and having died last night, and the weather warm, he will soon begin to smell.’

"Away went the servant, and soon returned with a proper coffin. The wife and family having got their lesson from the Doctor, gathered around him, and howled no little, while they were putting the body in the coffin. Presently, the pall-bear-

ers, who were quickly provided and let into the secret, started with the Hypochondriac for the church-yard. They had not gone far before they were met by one of the towns-people, who, having been properly drilled by the facetious Stevenson, cried out, 'Ah Doctor! what poor soul have you got there?'

"'Poor Mr. B——,' sighed the Doctor, 'left us last night.'

"'Great pity he had not left us twenty years ago,' replied the other, 'for he was a bad man.'

"Presently another of the towns-men met them with the same question. 'And what poor soul have you got there Doctor?'

"'Poor Mr. B——,' answered the Doctor again, 'is dead.'

"'Ah! indeed!' said the other. 'And so the devil has got his own at last.'

"'Oh villain!' exclaimed the man in the coffin, 'if I was not DEAD, how I would pay you for that.'

"Soon after this, while the pall-bearers were resting themselves near the church-yard, another one stepped up with the old question again, 'what poor soul have you got there, Doctor?' 'Poor Mr. B——,' he replied, 'is gone.'

"'Yes, and to h—ll,' said the other, 'for if he is not gone there, I see not what use there is for such a place.' Here the dead man bursting off the lid of the coffin, which had been purposely left loose, leapt out, exclaiming, 'Oh you villain! I am gone to h—ll, am I! Well, I have come back again to pay such ungrateful rascals as you are.' A race was immediately commenced between the dead man and the living, to the petrifying consternation of many of the spectators, at sight of a corpse, bursting from the coffin, and in all the horrors of the winding sheet, racing through the streets. After having exercised himself into a copious perspiration by this fantastic chase, the Hypochondriac was brought home by Dr. Stevenson freed of all his complaints. And by strengthening food, generous wine, cheerful company, and moderate exercise, was soon restored to perfect health.

"To demonstrate further, the happy effects of possessing quick wit, 'to shoot folly as it flies.' I will cite another case of Hypochondriasm, which came under the care of that philanthropic and learned physician, the late Dr. Crawford, of Baltimore, who, in every thing that was amiable and good, was not unlike his intimate friend, Doctor Stevenson.

"A certain Hypochondriac, who, for a long time, fancied himself dying of a liver complaint, was advised by Dr. Crawford, to make a journey to the state of Ohio. After an excursion of three months, he returned home, apparently in good health; but upon receiving information of the death of a twin

brother, who had actually died of a schirrus liver, he immediately took the staggers, and falling down, roared out that he was dead, and had, as he always expected, died of a liver complaint. Dr. Crawford being sent for, immediately attended, and asked the Hypochondriac how he could be dead, seeing he could talk. But still he would have it that he was actually dead. Whereupon the sagacious doctor exclaimed, 'O yes, the gentleman is certainly dead, and it is more than probable, that his liver was the death of him. However, to ascertain the fact, I will hasten to cut him open before putrefaction takes place. And thereupon, getting a carving knife, and whetting it as a butcher would to open a dead calf, he stepped up to him and began to open his waistcoat, when the Hypochondriac, horribly frightened, leaped up with the agility of a rabbit, and crying out, 'Murder! Murder! Murder!' ran off with a speed that would have defied a score of Doctors to catch him. After running a considerable distance, until he was almost exhausted, he halted; and not finding the Doctor at his heels, soon became composed. From that period, this gentleman was never known to complain of his liver; nor had he for better than twenty years afterwards, any symptom of this disease.'

VENEREAL DISEASE.

(*Syphilis.*)

This is a very contagious disease that prevails considerably in some of our large cities. It is supposed by some to be of ancient origin, yet it did not make its appearance in Europe until 1494 or 1495.

The disease consists essentially of a specific poison, which, when contracted gives rise to symptoms that mark two distinct stages of the affection, the *primary* and the *constitutional*. The primary or local symptoms, are not generally called syphilis, but receive the name of *gonorrhœa venerea* or *clap*, *chancre*, and *bubo*, according to its different seat or appearance.

GONORRHŒA.—Gonorrhœa may take place without the presence of the venereal poison; but when it follows as an effect of this, it generally sets in, in from a few days to one or two weeks, with an uneasiness about the parts of generation, such as an itching sensation in the glands of the penis, and a sore-

ness and tingling feeling along the whole course of the urethra. Soon after this, a whitish matter will make its appearance, and there will be a degree of pungency or burning in making water. There is considerable pain, in the glands, which will extend with greater or less activity, upwards along the course of the urethra; the glands becomes red and swollen, and very tender to the touch. The patient is usually much harrassed with painful excretions, particularly when in bed, and when the urine is voided. In many cases, the inflammatory action extends from the mucous membrane to the corpus or body of the penis, giving rise to much tenderness and hardness in this part. Attending this, there is usually a very painful symptom called *chordee*, which consists in strong and protracted erections, whilst from the hard and unyielding condition of the corpus spongiosum, the penis is thrown into a curved form with the head turned down and the body bent upwards. It is not unusual for small quantities of blood to be discharged with the gonorrhœal flux.

CHANCRES.—These make their appearance at an uncertain period after the venereal poison is contracted,—first by one or more small pimples, excoriations, or ulcers, that are situated on some part of the genital organs,—preceded, usually, with an itching in the part. These sores enlarge and assume all the characteristics of the most obstinate ulcers, with thick hardened borders. Nor is the induration confined to the margins, for the whole excavated surface of the ulcer is hard and unyielding. The true venereal chancre is always of an indolent character, or slow in its progress.

BUBOS.—The glands situated at the junctions of the limbs, possess a singular power of absorbing poisons carried into the circulation; and thus from this striking arrangement of things, poisons starting in the extremities, are often prevented from passing into the trunk among the viscera. When these glands have absorbed much poison, they swell considerably, and not unfrequently suppurate and break.

The glands in the groin, are those usually affected with the venereal poison; but it is very seldom the case, that from this cause more than one in a side, becomes affected at a time. When a gland thus swells, it is called *bubo*.

The bubo may continue for a time in an inflammatory condition, and then pass off by resolution, or it may suppurate, and then assume all the usual characteristics of an obstinate ulcer.

SYPHILIS.—The constitutional effects of the venereal poison, are still more horrible than the primary symptoms. The following description is given by Hooper:

“When venereal matter gets into the system, some symptoms of it may often be observed in the course of six or eight weeks, or probably sooner; but in some cases, it will continue in the circulating mass of fluids for many months before any visible signs of its effects are produced. The system being completely contaminated, it then occasions many local effects in different parts of the body, and shows itself under a variety of forms, many of which put on the appearance of a distinct disease. We may presume that this appearance depends wholly on the difference of constitution, the different kind of parts affected, and the different state these parts were in at the time the matter or poison was applied.

“The first symptoms usually show themselves on the skin and in the mouth or throat. When on the skin, reddish and brownish spots appear here and there on the surface, and eruptions of a copper color are dispersed over different parts of the body, on the top of which there soon forms a thick scurf or scale. This scurf falls off after a short time, and is succeeded by another, and the same happening several times, and at length casting off deep scabs, an ulcer is formed which discharges an acrid fœtid matter. When the matter is secreted in the glands of the throat and mouth, the tongue will often be affected so as to occasion a thickness of speech, and the tonsils, palate, and uvula will become ulcerated so as to produce a soreness and difficulty of swallowing, and likewise a hoarseness in the voice. In a venereal ulcer of the tonsil, a portion of it seems as if it was dug out; it is, moreover, very foul, and has a thick, white matter adhering to it, which cannot be washed off. By these characteristic marks it may, in general, readily be distinguished from any other species of ulceration in these parts.

“If the disease affects the eyes, obstinate inflammation, and sometimes ulceration, will also attack these organs. The matter sometimes falls on deep-seated parts, such as the tendons, ligaments, and periosteum, and occasions hard, painful swellings to arise, known by the name of *nodes*.

“When the disease is suffered to take its own course, and not counteracted by proper remedies, the patient will in the course of time, be afflicted with severe pains, but more particularly in the night time; his countenance will be sallow, his hair will fall off, he will lose his appetite, strength, and flesh; his rest will be much disturbed by night, and a small fever of the hectic kind will arise. The ulcers in the mouth

and throat being likewise suffered to spread, and to occasion a caries of the bones of the palate, an opening will be made from the mouth to the nose; and the cartilages and bones of the nose being at length corroded, this will sink on a level with the face. Some constitutions will bear up for a considerable time against the disease, while others again will soon sink under a general weakness and irritation produced by it. * * *

“The general appearances to be observed on dissection of those who die of lues, are, caries of the bones, but more particularly those of the cranium, often communicating ulceration to the brain itself, together with enlargements and indurations of the lymphatic glands, scirrhus of several of the organs, particularly the liver and lungs, and exostoses of many of the hardest bones.”

Cause.—It has already been stated that the venereal disease is produced by a specific poison. This is communicated by those affected with it, to others, by impure sexual intercourse; and thus in large cities where this unholy practice is extensive, the disease spreads very rapidly, as one individual may communicate the poison to an incredible number of others.

The disease may also be taken by the exposure of any excoriated, wounded, or otherwise unprotected part of the body to the contact of the poison, as by kissing, laying against a person laboring under the disease, &c.

It is also supposed, and it seems reasonable, that a child may by sucking at the breast, receive the poison from a nurse that is affected with syphilis; and on the other hand, that a child affected with it may communicate it to the nurse.

It has also been stated, that the disease has been communicated by a wound with a lancet, or knife infected with the poison.

Treatment.—In recent cases, when the first symptoms of gonorrhœa appear, nothing more may be necessary than an active cathartic, composed of equal parts of mandrake and blue flag in powder; and at the same time washing the parts, and injecting them with the following compound:

Take of Tincture of lobelia,.....	2 ounces.
“ Tincture of myrrh,.....	1 ounce.
“ Balsam of fir,.....	1 do.

Shake well in a bottle. This, if freely applied, will generally soon remove the unpleasant symptoms in the incipient stage of the disease.

When buboes make their appearance, the parts should be poulticed, if this be practicable, with the dregs of myrrh and lobelia, with some fine slippery elm bark. If this cannot be done, a liniment made by mixing together equal parts of the stimulating liniment and stramonium ointment, must be applied to the parts with gentle friction, three times a day. While this is being done, the system must be kept under the influence of the cathartic powder, above recommended.

When the tumors suppurate and break, they must be treated as is recommended for common ulcers.

Chancres and syphilitic ulcers, must be kept clean by washing them frequently with a strong solution of carbonate of potash. If situated where poultices may be applied, these should be used: they may be made as follows:

Take of Thoroughwort,.....	} equal parts.
“ Narrow dock root,.....	
“ Mandrake root, ...	
“ Bayberry, ...	
“ Slippery elm, ...	

Pulverize and form into a poultice by adding flour, if necessary. This should be laid over the ulcer, and be renewed, or a new one should be applied every morning and evening, washing out the sore at the dressings with a solution of potash, or an astringent tea, as the case may require, until it is ready to heal, when salves may be applied.

When the ulcers are very indolent, it is a good plan to drop into them some tincture of myrrh occasionally. The antispasmodic tincture, and the tincture of lobelia, are also beneficially used in this way.

When the ulcer presents a dark appearance, or exhibits other signs of mortification, a poultice of the dregs of myrrh should be applied, and renewed as often as the case may require. The pyroligneous acid is also very good to prevent mortification in these sores.

Such parts of the treatment recommended for scrofulous and common ulcers, as may be indicated here, should also be used.

In cases of confirmed syphilis, in which the poison produces its constitutional effects, a more thorough course of treatment is required. The vapor and lobelia may be required once twice or three times a week, as the urgency of the case may require.

The system must be constantly kept under the influence of the cathartic powder* recommended above. The doses of

* Adding a half part of the blood root, will improve this compound for this use.

this medicine, must be so regulated as not to operate too freely; but only to produce two or three operations per day.

The alterative syrup must be freely and perseveringly used throughout the treatment. There is perhaps no article that is a better alterative than this compound; and as articles of this class are particularly indicated, the importance of its use will be readily seen.

The balsamic diuretics, are important remedies in the treatment of syphilis. Among the best of these, for this use, are the balsam of copaiva, and balsam of fir. The queen of the meadow root, will also be found very useful.

When ulcers in the mouth and elsewhere make their appearance, they must be managed, (in addition to the general treatment,) as nearly as possible, after the plan recommended for ulcers arising from other causes.

The use of tonics is indispensable to the proper treatment of syphilis.

WENS.

Wens are roundish, loose, fleshy tumors, that grow superficially, on various parts of the body. They generally are situated in the cellular tissue, immediately under the skin.—They are seldom painful, and hardly ever become troublesome, only from the inconvenience arising from their bulk.

Treatment.—The wen may, generally, be removed by washing it frequently with salt water.

The following preparation will, however, act more promptly in its removal than the simple use of the salt water: Take the yolks of eggs, any quantity, beat them up, add as much pure salt as they will dissolve, and wear this over the wen—changing the application for a fresh one, every twelve hours.

Wens may be conveniently and safely taken out with the knife; or they may be removed by the use of caustics.

WHITE-SWELLING.

(Hydarthrus.)

White-swelling is a very inveterate and painful disease, that is usually seated on some of the joints of the body; particularly the hip, knee, ankle, and elbow. The swelling is generally very considerable, sometimes extending the size of the part beyond all proportion. The appearance of the skin, as the name implies, is natural or white, even when the inflammatory symptoms are at the highest.

The disease is usually very painful and distressing;* and the pain is much increased by the motion of the joint. As the affection advances, the limb becomes stiff, and continues in a crooked position. The swelling now becomes very hard, and if the disease is not arrested, suppuration will take place,—the tumor will break and discharge large quantities of matter, and not unfrequently some pieces of bones. Suppuration sometimes makes its appearance early in the disease; but more usually it does not come on for several months, and occasionally not for a year or two.

Various parts of the joints may be the immediate seat of the disease, as the ligaments or capsules, cartilages, tendons, periosteum, and even the bones. The ligaments sometimes ulcerate away so much as to let the bones slip out of their places, and thus expose them at the surface.

It would hardly be expected that such severe and extensive local disease, could long exist without giving rise to more or less constitutional derangement. The general health gradually becomes impaired; the appetite fails, and debility sets in. Considerable emaciation generally supervenes; and finally, if the disease is not arrested, the bowels become disordered,—a diarrhœa sets in, and in some severe cases, the patient continues to sink until released by death.

Treatment.—White-swelling, in by far the majority of cases, is connected with a strumous condition of the system; and therefore, in order to its successful treatment, a general treatment, like that recommended for scrofula, must be adopted. The circulating fluids must be kept in a pure and healthy condition; and for this purpose, general deturgents or depuratives, alteratives, baths, laxatives, cathartics, occasional emetics, and any other means that are calculated to promote

*It happens occasionally, that white-swelling progresses with very little pain, but this is rarely the case.

healthy secretion, and improve the condition of the general system, must be perseveringly used.

Local treatment.—The affected part should be fomented every day over a pot of volatile herbs, as pennyroyal, horse mint, marjorum, peppermint, &c. Immediately after this fomentation, if the case has not yet suppurated, some stimulating liniment must be rubbed on the parts, freely. Stimulating and relaxant poultices, are also generally found of considerable advantage. Binding on wilted, or bruised leaves of the jimson, and changing it for a fresh application daily, will be beneficial, if the parts are previously well rubbed, and bathed with the bathing drops.

An application, made by beating up some yolks of eggs, and adding as much salt as the mass will dissolve, if constantly worn over the swelling, and renewed by a fresh application every morning and evening, will generally prove an excellent means.

If the swelling should not readily yield to the above means, an irritating plaster must be applied, and worn until its specific effects are produced; and after this, relaxant poultices should be applied to keep up a discharge.

When suppuration has taken place, and the sore does not readily heal, but inclines to an ulcerous condition, a pretty strong solution of the carbonate of potash should be injected with a small syringe, designed for the purpose. The sores must also be washed out, at least once a day, with a strong astringent tea, by means of a sponge or syringe; and after this, some tincture of myrrh may be thrown into it, or instead of it, some pyroligneous acid.

The sore must then be poulticed with slippery elm, thoroughwort, lobelia, or astringent tonic, as the case may require, until it is ready to heal, when the salves should be used.

WHOOPIING COUGH.

(*Pertussis*.)

The whooping cough, is a very distressing disease, chiefly confined to children, and occurring but once in the same individual. It seems to be propagated by a specific contagion.

The proximate cause of this affection appears to consist of

a collection of viscid phlegm that accumulates in the bronchia, trachea, and fauces, and which adheres so firmly as to be expectorated with great difficulty. As soon as this phlegm becomes collected so as to excite irritation, a fit of coughing will ensue, which will seldom cease until the phlegm is removed either by the coughing or by vomiting. The patient will then have relief until the irritation is again produced by a new collection of the phlegm. These paroxysms of coughing, which may occur four or five times a day or oftener, are sometimes extremely severe. The patient not unfrequently becomes strangled and turns black in the face; and, in some instances, he may fall to the ground in a manner senseless. The coughing is attended with a peculiar kind whooping, whence the name of the affection. The disease, when left to run its course, will generally continue from six weeks to several months or longer.

Treatment.—Lobelia seems to be a specific for this disease. It should be used in expectorant or slightly nauseating doses, once in two or three hours. It may be given in substance, infusion, or in tincture. Sweetening seems to add to its beneficial effects. The *oxymel of lobelia*, is the best preparation of the article for this disease, as it is about as prompt in its effects as any other, and what is more, it is very pleasant and convenient to take.

The swamp cabbage, flaxseed tea, and many other articles, will be found useful, but will not be required when the lobelia is at hand.

WORMS.

(*Entozoa.*)

The following very excellent treatise on worms is copied from the American Edition of Marshall Hall's practice:

The cavities and passages of the living body afford a habitation to many species of parasitic animals, not only in man, but in the lower orders of the animal creation. No quadruped, bird, fish, reptile, or insect, is known to be exempt from them, and in those which have been most observed, a considerable variety of species has been brought to light. It is the object of the present chapter, to give a short notice of those

which inhabit the human body, and which, in certain cases, are instrumental in the production of morbid affections.

The entozoa, says Cuvier, can only propagate themselves in the interior of the bodies of other animals. There is hardly any animal which does not give support to several kinds of them, and frequently the same species of them does not inhabit more kinds of animal than one. They are not only found in the intestinal tube, and the ducts communicating with it, but also in the cellular tissue, and in the substance of the most recondite viscera, such as the brain and liver.

The difficulty of conceiving how they arrive in these situations, together with the observations that they are never met out of the living body, has caused some naturalists to believe in their spontaneous generation. But it is now sufficiently settled, not only that the greater part of them produce either ova or living young, but that they have distinct sexes, which copulate like other animals. We are therefore obliged, says Cuvier, to believe that they are propagated by germs sufficiently minute to enter the smallest passages, and that animals sometimes contain these germs at the time of birth.

Two orders of these parasitic animals are given by Cuvier, under the head of his *Intestinaux*. These are—

1. *Cavitary* animals, which have an intestinal canal floating in a distinct abdominal cavity, and furnished with a mouth and an anus. This order includes the various cylindrical worms, well known to medical men.

2. *Parenchymatous* animals, which have viscera imperfectly terminated, often resembling mere vascular ramifications, and in some cases hardly discoverable. To this order belong the flat, worms, the vesicular entozoa, &c.

Those who are curious in regard to the comparative anatomy and systematic arrangement of these animals, may find abundant information in the works of Rudolphi, Bremser and others. For the present purpose, it is thought best to confine ourselves chiefly to the common language and objects of the medical profession.

For practical use, we may consider the entozoa, under three general divisions: 1. The Cylindrical. 2. The Flat. 3. The vesicular, or hydatid.

I. CYLINDRICAL ENTOZOA.

These have cylindrical bodies tapering at one or both ends. Some of these reside in passages, and exercise the powers of

locomotion; others spend their lives closely coiled up in circumscribed cavities.

I. LUMBRICUS.

The first species of intestinal parasite is the long, round worm, commonly though improperly, called *lumbricus* by medical writers. This is the *ascaris lumbricoides* of Linnæus. The genus *Ascaris* has a cylindrical body, tapering at both ends, and a triangular mouth surrounded with three small prominences, or tubercles. The species in question is, when full grown, a foot or more in length, and is found not only in man but in various quadrupeds. It is supposed to feed upon chyme, and inhabits the small intestines, from whence it creeps upwards to the stomach, and in rare instances in the fauces. It is sometimes solitary, and sometimes exists in great numbers. The *symptoms* indicating its presence are equivocal; but are commonly considered to be, starting in the sleep, itching of the nose, irregular or excessive appetite, emaciation, &c.—Nevertheless these worms are often suspected of being present, when they do not exist, and often exist in healthy persons, without doing any harm. They are expelled in acute diseases, of which they are not the cause. The best remedies are active cathartics. * * *

The subjoined figure represents a lumbricus of middling size.



Ascaris Lumbricoides.

2. ASCARIDES.

The next species is the *maw worm*, or *pin worm*, which is of small size, and exists in great numbers. It is usually denominated, in medical books, by the plural epithet *ascarides*. It is the *ascaris vermicularis*, of Linnæus and Rudolphi. Bremser thought the three tubercles which characterize the genus *oscaris*, were wanting in this species, while he found the circular mouth which belongs to *oxyuris*. He therefore changed the name to *oxyuris vermicularis*. But it has since been observed by Dr. Bellingham, in the Dublin Journal, that the three tubercles are always visible in the recent state, also when the animal is preserved in water, but that when put into alcohol, the tubercles are obliterated, whence he thinks the mistake of Bremser arose.

The natural history of the small ascarides is curious and not well understood. Many individuals are infected with them in childhood, but get rid of them as they advance in years. Some, however, are troubled with them during the whole of a long life, though they are represented as less annoying after middle age, than before. They most commonly appear periodically, both in children and adults, after intervals of from three to six weeks. During the intervals they are neither felt, nor seen in the discharges. Their periodical return is announced by a sense of itching and burning at the extremity of the rectum, felt principally in the evening, sometimes producing tumefaction, and eruption in the neighboring skin. This irritation continues to recur every evening for perhaps a week, or more, and then ceases. During this time the worms are discharged alive and active in every alvine evacuation. Cathartics and enemata bring away vast numbers of them, but without diminishing the annoyance occasioned by those which remain behind. At length they spontaneously cease to appear, the irritation subsides, cathartics no longer bring them to light, and the inexperienced practitioner flatters himself that the evil is remedied. Nevertheless, after a few weeks, they again return in undiminished numbers, attended by the same phenomena as before. Whether the new race are cotemporaries of the old, or descendants from them, it is not easy to tell.

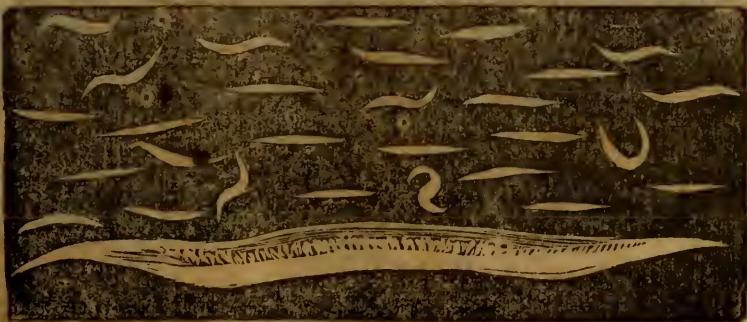
It is commonly believed that the principal residence of ascarides is in the rectum, because they are most felt there.—They have been found, however, in every part of the alimentary tube. Many patients, immediately after a cessation of

the annoyance in the rectum, are visited by pain in the epigastrium, attended with costiveness and clay-colored discharges. This state continues for two or three days, and is then followed, by a bilious diarrhœa. We have repeatedly known these consecutive events to occur with great regularity for half a dozen years, so much so, that our inquiries are generally directed towards this cause, when children have complained of epigastric pains at regular periods. Whether, in these cases, the worms ascend to the duodenum and mouth of the biliary duct, or whether the whole is an affair of sympathy, is difficult to determine.

The nidus [nest] of these animals, and perhaps the food also appears to be the mucus which lines the alimentary canal. Buried in this substance they resist the effect of the most violent cathartics and vermifuges, oil of turpentine and croton not excepted. If it be permitted to derive an hypothesis from the phenomena which they exhibit, it would be, that during a greater part of the time, they remain quietly imbedded in this mucus, deriving from it their habitation and nourishment, being at the same time secured from the effects of the peristaltic motion; but that at certain periods, perhaps at their generating seasons, they issue forth from this covert, and mingle themselves in the contents of the alimentary canal; in consequence of which, they are liable to be expelled with the common mass.

We have known ascarides to be eradicated by a severe dysentery. In some cases they have been totally removed by large injections of oil, particularly of lamp oil. But more frequently they resist these and most other remedies for a series of years. A temporary palliative may always be found in small injections of weak salt water, or even of an ounce or two of cold water.

The next figure exhibits ascarides of the natural size, together with one specimen highly magnified:

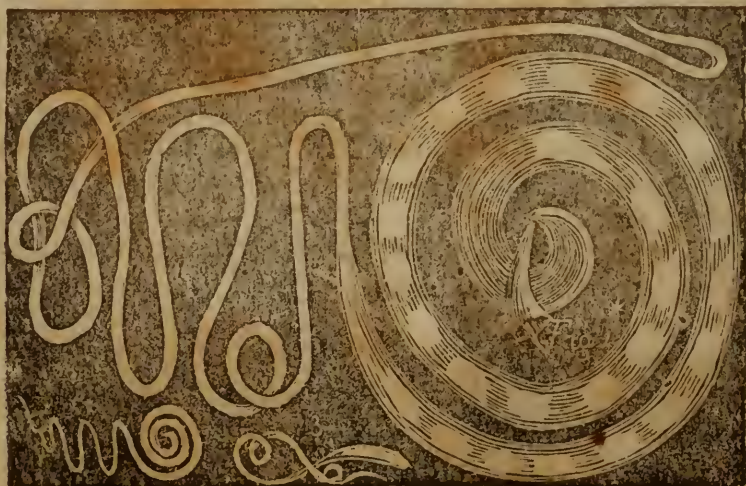


Ascaris Vermicularis.

3. TRICHOCEPHALUS.

The third specimen of worm inhabiting the human intestine, is the *trichocephalus dispar*. This worm is about two inches long, of which length about two thirds consists of an attenuated, thread-like filament, while the remaining third is many times larger. Originally the thread-like portion was thought to be the tail, and the animal was named *Trichuris*. But it is since found that the attenuated portion is the head, and contains the mouth of the animal, so that the name is now changed to *Trichocephalus*. The large extremity of the male is usually coiled up, and has the genital organ projecting from the end. That of the female is more straight, and terminates with a simple aperture.

It is remarkable that this species of worm is among the most common in some parts of Europe, while, in this country it seems to be exceedingly rare. Cuvier speaks of it as one of the most common worms of the large intestines, and Mr. Joy, in the *Cyclopedia of Practical Medicine*, says, it is discoverable in the bodies of almost all individuals. But on this side of the Atlantic, some of our oldest physicians have never met with it in practice.



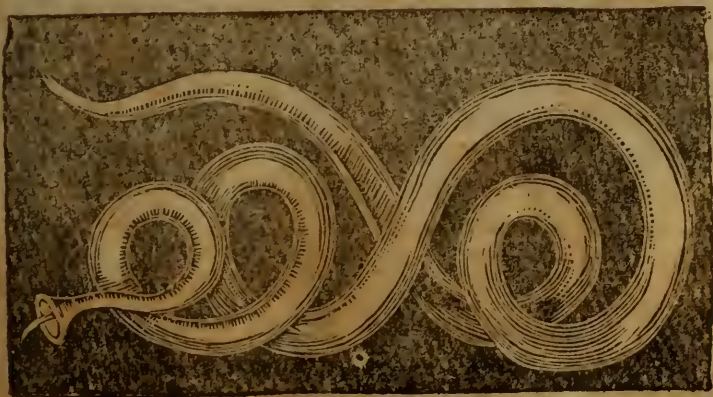
Trichocephalus Dispar.

*Fig. 1 represents the trichocephalus highly magnified, the head being at a. Fig. 2 is the male, and fig. 3 the female, of natural size.

4. STRONGYLUS.

The *strongylus gigas* is one of the largest species of entozoa, and is found inhabiting the kidneys of man and of various quadrupeds. It is usually of a blood-red color, and is sometimes even two or three feet in length. Its form is cylindrical and tapering, ending posteriorly in a trumpet shaped extremity from which in the male, a spicular body, supposed to be the organ of generation, proceeds. In this species the head is obtuse, and the mouth surrounded with six ridges or papillæ. These animals are found of various sizes, and are said to be never met with except when the structure of the kidney is in some measure destroyed or broken down. Whether their presence is a cause or consequence of disease, it not sufficiently known.

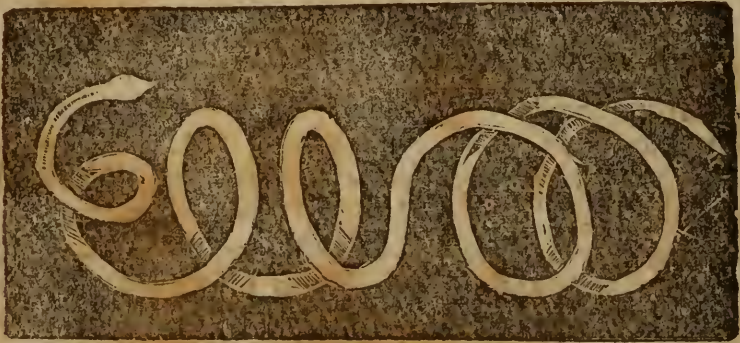
Many cases are on record of worms of this description, found in the kidney, in postmortem examinations, and of others discharged from the urethra during life. They have generally occasioned much irritation and distress in the urinary passages. Mr. Lawrence, in the Medico Chirurgical transactions, mentions the case of a woman, who in the course of a few months, voided by the urethra no less than a thousand worms. These were supposed, by Bremser, to be young strongyli. In some other cases, the animals discharged have appeared to belong to different species. The following figure represents the entire strongylus:



Strongylus Gigas.

5. FILARIA.

The *Filaria Medinensis*, or Guinea worm, is a very troublesome inhabitant of hot climates, being found under the skin, and in the cellular and muscular substance of men and animals. The *Filaria* has a smooth, round, filiform body, and an orbicular mouth. The present species is distinguished by its great length, which is sometimes three or four feet, and by the termination of the tail, which is pointed and curved. Its size is about that of a pigeon's quill or smaller.

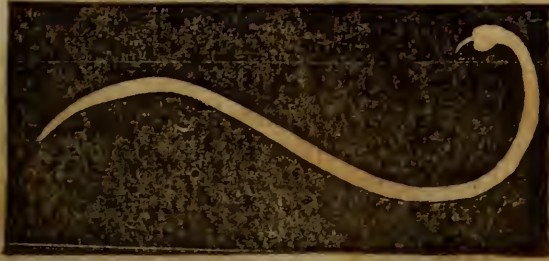


Filaria medinensis.

These worms appear to be formed within the substance of the body, and are discovered when they approach the surface, by an itching at the spot, followed by the formation of a vesicle, or pustule, where the worm is about to issue. They have sometimes remained for years in the flesh without material inconvenience, while at other times they occasion severe pain and inflammation. When they appear at the surface, they are capable of being wholly extracted. Great care is necessary to avoid breaking them, since a dead portion left behind is found to occasion inflammation and abscesses. It is therefore customary to use the most gentle force, extracting a small portion at a time, and winding it on a stick. This operation is repeated about twice a day until the whole worm is gradually extracted.

Another species called *Filaria bronchialis*, has been found in the lungs when in a state of disease. It is sometimes met with in great numbers in the lungs of inferior animals, but only one instance is known of its discovery in those of man. It was found by Treutler in the enlarged bronchial glands of

a phthisical patient. It is called *Hamularia subcompressa*, by Rudolphi and others.



Filaria Bronchialis.

6. TRICHINA.

The *Trichina spiralis* is a minute worm lately discovered by Mr. Owen, existing in great numbers in the muscular substance of the human body. They are found in minute cysts of an ovoid or oblong figure, resembling nits of pediculi interspersed among the muscular fibres. When these cysts are examined with a microscope, they are found to contain one, or sometimes two of these worms, coiled up in a spiral form. According to Dr. Hodgkin, they are wholly confined to the muscles of voluntary motion, and to the tendons connected with them. He found them in one case, in every muscle of the body which he examined, even to the lumbricales of the foot. He then looked for them in the æsophagus without discovering the least trace of them. They ceased abruptly at the lowest contractor of the larynx. They have not been found in the heart; nor in any other involuntary muscle. No symptoms have been observed as pathognomonic of their presence. They have been found in some cachectic subjects, and in others who died suddenly in apparent health. * * *

II. FLAT ENTOZOA.

7. TÆNIA.

The *Tænia solium* or common *Tape worm*, is one of the most troublesome and formidable inmates of the alimentary canal. The genus to which it belongs is characterized by an elongated, flat-body, composed of numerous joints, and having four suckers on the head. In the present species the head is somewhat hemispherical and flattened laterally having an obtuse prominence in front. The joints are oblong and nearly square, and have been compared in shape, to the seeds of the gourd. They are generally longer than they are broad, though the animal sometimes contracts them into the opposite form. The anterior portion of the animal is much smaller than the rest of the body, and the joints appear to be made up of amorphous cellular texture, without any abdominal cavity, and with but indistinct traces of internal organs. Each joint is somewhat rounded at its anterior extremity, and is received into the posterior extremity of the preceding joint which is larger and fringed.



Tænia solium.

The head which has been differently represented by writers, appears to be a minute tubercle, terminating in a very slender neck. It has, on its anterior part a circular aperture or depression, surrounded by a star of sharp, curved processes or hooks. These processes, however, are not constantly found, and are thought by some to disappear with age. On the four

*Fig. 1 shows the head and upper joints of the body, of natural size. Fig. 2 is a number of joints of the body of a natural size.

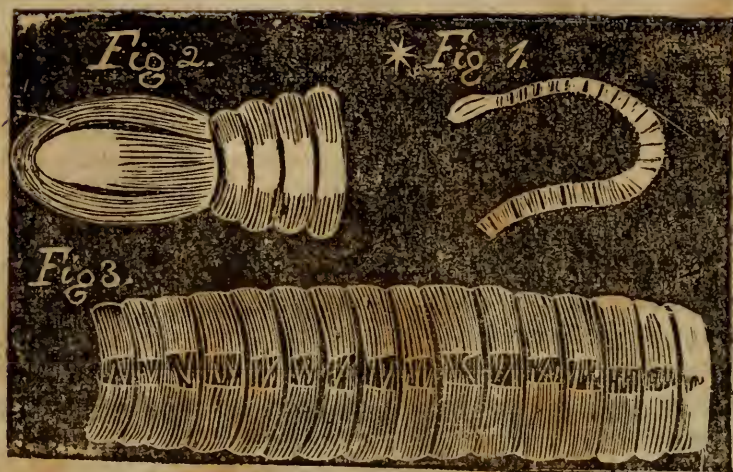
sides of the head are situated four apertures or suckers, which seem to be mouths, as from each of them proceeds a vessel, running along the whole length of the animal near the margins of the joints, and communicating with the rest by transverse passages in every joint. Lateral orifices are found, generally on alternate margins of the joints.

The tape worm is capable of subsisting in the intestine for an indefinite number of years, continually casting off joints, which appear in the stools. Whether these joints are reproduced, and if so, in what manner, is a subject of hypothesis, upon which different opinions are entertained. Several tape worms have been known to exist in the same individual.

The symptoms indicating the presence of *tænia* are slight, so as not to attract notice, until the joints are observed in the discharges, or are found in the clothes or bed, having crawled away from the rectum. But generally, if the worm has attained considerable size, there is more or less pain, sense of weight, and uneasiness in the abdomen, voracious appetite, nausea, itching of the anus and nose and sometimes atrophy. * * *

8. BOTHRIOCEPHALUS.

The *Bothriocephalus latus*, or broad tape worm, was formerly considered a species of *tænia*. It however differs in the form of its head, which is marked with furrows instead of orifices. The joints are also very broad in proportion to their length, and have orifices on their broad surfaces, instead of the edges. This worm is common in Switzerland and Russia. Its joints separate with much more difficulty than those of the *tænia*, and it is more obstinate under the employment of remedies.



Bothriocephalus latus.

9. DISTOMA.

This animal is rare in the human species, and has hitherto been met with chiefly in the gallbladder, though in some quadrupeds, particularly the sheep, it is often found in the liver in considerable numbers. The *Distoma hepaticum* is called *Fasciola hepatica* by the older naturalists. It is a soft roundish flat animal, with two large roundish openings on the under side of the body. When full grown, it is about the size of a melon seed in man, but in quadrupeds it is often found sometimes an inch long by half an inch wide. Their general outline is oblong, with conical extremities, but the shape varies with the contractions of the animal. The color is yellowish, or light brown. It is known to butchers by the name of *fluke* or *fluke worm*.

III. VESICULAR ENTOZOA.

From a remote period anatomists have discovered in various parts of the body, both in man and in other animals, certain organized cavities of preternatural formations, resembling cysts or bladders, and varying greatly from each other, both in size and figure. They are known among physicians by the name of *hydatids*. These were at first considered as morbid changes in the animal texture in which they were found residing, but later observers have discovered in them

* Fig. 1, is the head and upper joints of natural size. Fig. 2, the head magnified. Fig. 3, joints of the body of natural size.

certain properties, which lead to the belief that they have a separate vitality, or in other words, are distinct animals. This opinion is derived chiefly from the contractile powers which they exhibit when stimulated. Some of them have been noticed, when cut with a knife, to eject their contents with some force; others retract or invert their cut edges, and some have been observed to turn themselves nearly inside out. Various genera and species have been described, some of which are regularly organized, others are very imperfect, minute or variable, and, therefore, difficult of satisfactory description.

10. CYSTICERCUS.

This genus has a complete organization, having a head furnished with four suckers, and a neck terminating in caudal vesicle. The species best known is the *cysticercus cellulosus*, which is said to have been found in man, but is very common in hogs, where they exist in great numbers, giving rise to the disease called in England *leprosy*, and in the United States, *measles*. This species is from two to ten lines in length, and has an ovoid or pear-shaped bladder, and a head, which, under the microscope, exhibits thirty-two hooks, arranged in a double circular row. Several other species have been described.—They usually reside in free cavities in the cellular texture, and have been found even in the brain and eyes.

11. ACEPHALOCYST.

The most common species of hydatid is the *acephalocystis*, an animal, which, as its name indicates, consists of a bladder without a head. The shape of this hydatid is uniformly round, or oval, and it varies from the smallest perceptible size to the circumference of several inches. The coats are translucent and composed of a white, semi-opaque, pulpy, matter, separable into two layers. It contains a thin, watery fluid, which is commonly transparent, or slightly yellowish. Many of these Hydatids are included in a common cavity or cyst, to which they have no adherence, nor any to each other. The fluid in which they are enveloped is variously turbid and opaque, while that contained in the cysts themselves, is perfectly clear, a circumstance which has been considered as indicating an assimilative function residing in the tunics. Some of them

have a number of minute vesicles adhering to their inner surface, resembling small pearls in appearance, and thought by Hunter and others to be young hydatids.

Acephalocysts have been found in almost every structure and cavity of the human body, they have been vomited from the stomach, discharged from the intestines, voided in the urine, coughed up from the lungs, and discharged from tumors in various parts of the body.

The presence of hydatids is accompanied with various morbid affections, especially tumor, in the part where they reside. Little is known of their therapeutic management, except in those cases which admit of their destruction by surgical means.

A number of other entozoa have been described or cited by those who have written works on the subject, among which are species of *spiroptera*, *echin ocooccus*, *polystoma*, &c. But most of these are either of doubtful authority, or too imperfect in their organization to afford interesting objects of examination. They are, therefore, omitted here, together with the numerous insulated cases in which terrestrial insects and particularly larva of insects have accidentally introduced themselves into the cavities of the body, and given rise to phenomena of disease.

Treatment.—The agents used to expel worms may properly be said to consist of three kinds; 1, those that destroy the worms; 2, those that remove them by mere mechanical means; and 3, those that have a tendency so to tone up and fortify the system against them as will result, ultimately, in their expulsion.

The only intestinal worms of any importance, are the long round worm (*ascaris lumbricus*;) the pin worm (*ascaris vermicularis*;) the thread worm (*trichocephalis dispar*;) and the two varieties of tape worm (*taenia*.) These may, generally, all be removed by the same means. Nevertheless, it appears that some of our anthelmintics are the best in the removal of one variety, while others in another.

The pink root seems to be one of the best articles to remove the lumbricoides, or long round worm. It is best taken in infusion. Half an ounce may be boiled for two hours in a covered vessel; and then, after using gentle physic and spare diet for a day or two, the infusion should be taken, in doses of a tablespoonful to the child, and a teacupful to the adult, three or four times a day, for three days, when it must be followed with an active cathartic of senna, aloes, mandrake or rhubarb, to carry off the worms.

If the use of the pink root should not prove successful, the wormseed oil may be used in doses of from five to ten drops to a child, and from fifteen to twenty to an adult. The medicine should be given two or three times a day for some three days, and then be followed with a brisk cathartic. It is a very common practice to mix the wormseed oil with some castor oil, thus making a vermifuge that is considerably popular.—A formula for the preparation of this vermifuge is given among the compounds.

The male fern is also an excellent article for the removal of this variety of worms; it is given in powder or ethereal extract. The dose of the powder is from one to three drachms, to be given in the form of electuary or emulsion, and repeated morning and evening for one or two days, successively.—The medicine should be followed with a brisk cathartic of castor oil or senna.

When it is desired to destroy the animals, the cowhage will be found an excellent article. The common way of preparing it is to dip the pods into some syrup or molasses, and then scrape off the spiculæ or hairs with the liquid, which, is in a proper state for administration, when it has attained the thickness of honey. The dose of this mixture is a tablespoonful for an adult, a teaspoonful for a child three years old, to be given every morning for three days, and then followed by a brisk cathartic.

The pin worm (*ascaris vermicularis*) is much harder to expel than the long round worm. This variety chiefly occupies the rectum or lower part of the large intestine, and is hence not much affected by the anthelmintics used in the common way. It is best, therefore, not only to use the medicine per stomach, as ordered for the other varieties of worms, but to administer the same articles freely by injection. Aloes seems to answer best as a cathartic, after the proper anthelmintics are used, as it inclines to act more powerfully on the lower portion of the intestines. The dose of this medicine for the expulsion of worms, is from ten to twenty grains. It is, perhaps, the best plan to give ten grains morning and evening until the desired effect is produced,—at the same time giving it by injection.

Equal parts of lime-water and milk, given by injection two or three times a day, will sometimes remove the pin worms in large quantities. Spirits of turpentine with milk, in the proportion of a teaspoonful of the former to a gill of the latter, administered in the same way two or three times a day, will also be found a good remedy.

The annoyance from this variety of worms is very apt to be renewed, even in cases in which complete relief had been

obtained. Whether the worms renewing the difficulty were cotemporaries with those removed, or whether they are a new generation, it is difficult to tell.

Perseverance in the treatment alone will afford any thing like permanent relief from the annoyance of these worms.

For the expulsion of the tape worm, the bark of the root of the pomegranate is, perhaps, the best article that we possess. The best way to prepare the medicine, is to boil two ounces of the fine bark in two quarts of water, straining, and then boiling it down to one quart. Of this the dose is a wine-glassful once in two hours until all is taken, when it should be followed up with a brisk cathartic.

The male fern is a remedy of great antiquity, Dioscorides, Theophrastus, Galen and Pliny, speak of it. There is no anthelmintic that has had greater popularity than this. In 1775 the King of France purchased of Madame Nouffer, a Swiss lady, the knowledge of a secret cure of the tape worm, that had gained great popularity. This remedy, which was published by order of the king, consisted of nothing more than the root of the male fern. The manner of its use was one large dose of the powdered root, (from one to three drachms,) to be followed in two hours with a brisk cathartic. If this process did not prove successful, it was to be repeated with proper intervals till the worm came away.

The medicine is, however, more commonly used in smaller doses for several days, and then followed by the cathartics.

All the other varieties of intestinal worms may be successfully expelled by the means here recommended for those just treated.

Those entozoa that occur in the parenchymatous, muscular and cuticular tissues, are of extremely rare occurrence, but when they do occur, they are removed with difficulty.

In the treatment of these cases, a strict attention to regimen is necessary. Cleanliness, above all other things, must be scrupulously observed; the diet, exercise, and other habits must be so changed and regulated as will favor a condition of the system opposite that under which the parasites were produced. A syrup, made of meadow fern, narrow dock, burdock, and black pepper, should be prepared and used perseveringly. The body may be exposed to sulphurous vapor. The pomegranate bark should be taken two or three times a week, and an occasional dose of turpentine may be taken. Together with these means, a good constitutional or general treatment must also be instituted and persevered in. The digestion must be well sustained, and the secretions must be kept pure and regular.

The medicines that are commonly used to invigorate and tone up the system, and thus to dispose, protect and fortify it against the invasion and generation of worms or parasitic animals, are those of the bitter tonic class. Among the best articles are poplar bark, wormwood, the twigs of the peach, white walnut bark, &c.; but all the bitter tonics are serviceable.

WOUNDS.

(*Vulnum.*)

A wound is the solution of continuity in the soft parts of the body. They present many different appearances, as regards their situation; the parts implicated; their direction; size; shape; the nature of the instrument or agent by which they are produced; their more or less simple or complex character, duration, &c.

The wound is called *incised* when made by a cutting instrument; when by a pointed instrument *punctured*; when the parts are torn or broken down by the wounding body, the injury is called *laceration*; when, in addition to the wound, there is some venomous or poisonous substance introduced, as by the bite of a serpent, the injury is called a *poisoned wound*; when the injury is inflicted by an obtuse or blunt body, it is called a contusion; and when caused by a bullet or other body projected from fire arms, it receives the name of *gunshot wounds*.

Wounds also differ with regard to their liability to bleed. Incised wounds generally bleed very considerably, especially when large vessels are divided. Lacerated and contused wounds are less apt to bleed profusely; and punctured wounds sometimes do not bleed at all.

Treatment.—In the proper management of wounds, four important indications are to be fulfilled: these are—1, to stop the hæmorrhage or bleeding; 2, to cleanse the wound of such foreign substances as may have been obtruded into the part and left behind; 3, reduce or close up the wound, and so adjust the parts as will most favor the rapidity of the healing process, and the smallness of the cicatrix; and 4, to secure rest to the parts until they are healed.

When the situation and character of the wound, will admit

of the means of compression, the bleeding may in this way most generally be stoped. But if this fails, the most active styptics must be applied.

It happens, sometimes, when large arteries are divided, that the hæmorrhage cannot in any way be arrested short of a ligature. In those cases the artery must be immediately taken up and tied.

As hæmorrhage from wounds has been treated under a separate head, it is unnecessary here to add any thing further; see accidental bleeding.

When the bleeding is arrested, the wound must be well examined by means of a probe, unless it is known from the cause or instrument by which the wound was inflicted, that no foreign substance can remain. But unless it is necessary to disturb the wound to remove extraneous bodies or to sew it up, or in any other way to reduce the orifice, the coagula or clots of blood and albumen should be carefully left to remain.

The wound being cleansed from foreign substances, the next thing to be done is to bring its margins together as near as possible to their original position. This may sometimes be done by bandages, or by means of adhesive straps. But if this is impracticable, a few stitches may be taken through the margins of the wound and the latter in this way brought together so as to favor the restorative process as much as possible. A few poultices of slippery elm may now only be necessary and then the wound healed up as fast as possible, by the use of proper healing salves and rest.

Should there be much inflammation and pain during the treatment, relaxant and emmollient poultices and washes will be required. Should ulceration set in, the sore must be treated as recommended for ulcers.

PART SECOND.

MATERIA MEDICA.

Materia medica literally means *matter of medicine*; but by this term is generally understood a full treatise on the materials that constitute that catalogue of agents, both natural and artificial, that are commonly used as medicines or remedial means.

There is certainly no point in medicine on which physicians are more divided than they are on the extent or true limits of the materia medica. While some contend that the *Vegetable Kingdom* is its only province; others, with the same confidence, declare that it embraces the *Mineral*, *Vegetable*, and *Animal Kingdoms*. There is still another and more important distinction, on which the two great classes of the medical profession have taken opposite positions. The Allopathic or fashionable schools and practitioners of medicine, still embrace *Poisons* and *Medicines* indiscriminately in their catalogue, while the Reformed schools and practitioners scrupulously reject all such agents as are known to be intrinsically poisonous, selecting such only as are known to be perfectly safe in their operation or effects.

It is objected on the part of those unfriendly to the selected materia medica, that all medicines are more or less poisonous, and that the virtues and usefulness of many important articles depend entirely upon the poison they contain. It is also argued that even the most simple and common articles of

food, become poisonous when improperly used. But the facts in these premises are entirely overlooked. A poison is an agent whose legitimate action in the animal body has a tendency to destroy life. No article therefore whose specific tendency in the organism is to *sustain* and *promote* life or vitality, can rationally be said to be poisonous. The mischief does not arise from the effects of any intrinsic power or property of these articles, but is the legitimate result of the *circumstances* attending their use. Thus when an excessive quantity of wholesome food is taken it will do mischief, but this does not argue that the food was poisonous, it being clear that the mischief was not in the *quality*, but in the *quantity* of the food taken.

An article that is intrinsically poisonous, is mischievous at any dose, although the extent of this is generally in proportion to the quantity of the article taken. By this, therefore, the poisonous agents are clearly distinguished.

The doctrine, then, that medicines, in order to insure their prompt and beneficial effects, must necessarily be poisonous, is *unfounded* and *false*.

The fact that the materia medica of the Reformed practice is almost exclusively drawn from the Vegetable Kingdom is not the least circumstance in its favor, as it is known that materials in a state of vital organization are infinitely more compatible with the physiological laws, than *crude inorganic minerals* are found to be.

In the use of highly organized medical agents, we have not only the advantage of their remarkable potency, but their value is much enhanced by the singular promptness attending their action. It is, therefore, not a little amusing to hear those unfriendly to the reformed practice, when unable to answer the arguments in its favor, say that "*botanic medicine will do very well in common cases, but in those more difficult, strong medicine will be required.*"

In the following short treatise on *materia medica*, the several articles are classed off according to their most prominent therapeutic effects, thus affording facilities to the practitioner that are not to be found in the old alphabetical arrangement. The practitioner need only turn to the class of the agents required, when he is at once presented, not only with a list of the most prominent agents of the kind, but he will know their comparative value by the order in which they appear in the chapter.

CHAPTER I.

Medicines affecting, most prominently, the alimentary canal and its contents.

I. EMETICS.

Emetics are substances whose specific action is on the stomach, and which are capable of exciting this organ so as to produce vomiting by means independent of a mere distention, or of any nauseous taste or smell; but which, by their peculiar irritating effect on the nervous coat of the stomach, uniformly, either independently, or by consent of the muscles of the diaphragm and abdomen, bring about alternate contractions and relaxations of the muscles of this organ, so as to eject its contents.

About the propriety of the use of emetics, there is now but little dispute. Although there are still some who contend that emesis is not a natural indication in the cure of disease.—They seem not to recognize irritability as an element necessary to the physiological condition, and hence regard all substances irritating the nerves as injurious. Experience, however, proves the absurdity of this doctrine, and abundantly establishes the utility of emetics in the cure of disease.

The importance of keeping the stomach clean, and in a healthy condition, will appear when we consider that this is the ultimate source of all the humors and secretions of the entire body, and that when, therefore, the contents of this organ are vitiated, all the humors will be corrupted in a corresponding degree; nor does this view embrace all that is important in the premises; for the operation of emetics is generally attended with an increased activity of the absorbents. The relaxation common to the operation of an emetic is also, in many cases, of great service, especially in such as spasms, asthma, cynancha and rheumatism. Emesis is likewise a great promoter of expectoration, and still more of perspiration.

The shock or agitation given to the entire system in the act of vomiting, is, in some instances, of great benefit. Dropsies, consumption, liver complaints, and many other violent diseases, are often known to yield to it. By the same means emetics also exert a beneficial influence over the nervous system: and to the several conditions brought about by their use, fevers are known to yield more readily than to the operation of any other medicine.

The stomach being, as it were, the centre of sympathy, much depends on its condition in view of this relation; and here it is worthy of remark that physicians have not generally been sufficiently particular in their diagnostic and pathological researches.

Finally, the evacuations produced by emetics, are by no means confined to the stomach; the compression produced by the contraction of the muscles of the diaphragm and abdomen causes a free discharge from the liver, when this organ is obstructed by thick and vitiated bile. This is brought up by an inversive action of the duodenum; and, as already hinted, the capillary and bronchial vessels, are generally much relieved by the use of these agents.

In the use of articles of this class, attention should be paid to the following particulars.

1st. Unless circumstances require the immediate evacuation of the stomach, emetics should be administered in broken doses, repeated at short or suitable intervals, until the desired effect is produced; as the susceptibility of the stomach to the impressions of these medicines, varies much in different individuals, and in the same individuals at different times. By these means, therefore, any individual may receive his proper dose, as he will generally vomit when he has received what is sufficient for him.

2nd. As the contents of the stomach in diseased habits of this organ, are often in different chemical states, it sometimes becomes necessary to correct certain conditions in order to procure emesis; thus, for instance, when the fermenting process is in progress, it becomes necessary to use an alkali; and, as this condition is the most common hindrance to emesis, it is well, as a general rule, to observe the precaution of giving a small portion of soda dissolved in warm water, or some other suitable alkali, in the same way, in all cases when emesis does not take place after a suitable portion of the emetic has been taken.

3rd. When there is much fever or congestion, emetics should not be given in doses sufficiently large to produce vomiting, until the system is first well relaxed, and the pores of the skin opened.

4th. During the operation of emetics, the patient should drink freely of warm diluents, such as *thoroughwort*, *chamomile*, or even warm water. When the emetic sickens and does not operate, and especially if it relaxes the system much, the drink should consist of some astringent infusion, such as that of the astringent compound or any of its ingredients. Indeed many physicians are in the habit universally of preparing the emetic in a tea of some astringent article, and then to give the latter freely as a drink during the operation. Should the operation be protracted and fatiguing, the patient should be supported by drinking some nourishing broths, gruel or porridge. The patient is often thirsty, and calls for cold water during, as well as after the operation of an emetic, but it is not always best to indulge him in the use of much cold water, as it is too apt to chill the stomach, and thus sometimes to occasion cramp. Pennyroyal or some other pleasant stimulating tea should be drank in its stead. As a general thing it is well to exhibit in connection with the emetic some stimulants, such as cayenne pepper or ginger.

LOBELIA INFLATA.



Lobelia, Emetic Herb, Indian Tobacco, Puke Weed, &c..

Special Emetics.

LOBELIA INFLATA.

Lobelia, Emetic Herb, Indian Tobacco, Puke Weed, &c.

Sexual System.—Class 5; order 1.

Description —The lobelia has a white fibrous root, and an upright pubescent stem, which is much branched about mid-way, and generally grows from one to two feet high. The tops of the branches generally range with the top of the stem, so as to give the plant quite a conical appearance from mid-way up. The leaves are from one to three inches long, lanceolate, but throwing the taper the longest toward the top; they are serrate, acute, sessile, pubescent on both sides, and stand scattered on the branches, and stem. The flowers are of a delicate blue color, numerous, disposed in leafy terminal racemes, and are supported on short axillary footstalks. The pod, which immediately follows the flower, is of an irregularly flattened oval, inflated, striated, and crowned with a collar divided into five irregular segments, constituting the corolla. The seeds are very minute, many in number, are found loose in the capsules, and when ripe are of a brown color.

Locality and habits.—This valuable plant is indigenous to this country, and grows on every variety of soil; we frequently find it growing very plentifully in neglected fields, in pastures, woods, and even by the road-sides. In its wild or natural state, is biennial, but by cultivation it may be brought to maturity in one year. In its biennial habits, it puts forth, in the first season, only a few radical leaves, about an inch in diameter, laying close to the ground. In the following season it shoots forth its stalk and branches, and commences flowering in July, and continues till late in the season. Some of the pods may be seen on the lower branches fully developed, while the topmost branches and stem are in full bloom. The entire plant exudes, when broken or wounded, an acrid milky juice.

Preparation.—Every part of the plant is possessed of its valuable medicinal properties, but the seeds are most active. Lobelia should be collected as soon as its lower leaves begin to turn yellow, for at this time much of the seed is ripe, while the herb is likewise in a proper state for preservation. When gathered, the plant should be cut with care, so as to save the seed which lays loose in the open pod, and should then be dried on sheets protected from moisture. When dry, the pods and leaves may be threshed off from the stem, and separated from the latter, when the seed may again be procured separately by means of a fine sieve. For the mode of compounding and manufacturing, see pharmacy.

Lobelia yields its medicinal properties readily to water, alcohol, ether, and acetic acid.

Medical Properties and Uses.—Lobelia is decidedly the most efficient, safe, and prompt emetic known, and unlike almost every other article, does not inflame, corrode, or in any other way injure the stomach in bringing about its specific effects. But of this article it may be emphatically said, that it operates in happy concert with the physiological laws. It is true however, that much has been said and written against it by the profession as well as the people, but this must reasonably be expected, as the article stands most prominent in the materia medica of the reformed system, which constitutes the most bold and successful innovation on the old and established practice ever known in the annals of medicine. In addition to its emetic properties, lobelia also possesses others, the effects of several of which, to some extent, are always developed on the exhibition of the former; and in this perhaps, the medicine possesses its greatest advantage over other emetics. Preceding its operation as an emetic, we discover the manifestation of a singular relaxing power, which admirably prepares the system for free and thorough emesis; and it is a rare circumstance when the emetic operates without the supervention of the most profuse diaphoresis. In this, therefore, the great objections to the exhibition of an emetic in cases of high fevers, and congestion, are obviated; and hence the lobelia emetic, when properly administered, becomes the most valuable remedy even in high congestive, as well as in any other fever; and may be used moreover, with the rare but cheering prospect of cutting short the fever, even in the height of the paroxysm.

This article may be used with safety, and certain prospect of advantage in all cases in which an emetic is indicated.

When an emetic is indicated in *asthma*, the lobelia answers a better purpose than any other article yet discovered. Its relaxant and expectorant properties conjoined with the emetic, render it an excellent anti-asthmatic. This combination of agencies is what gives it its eminence in the treatment of *consumption*, *pleurisy*, *whooping-cough*, *croup*, and all other pulmonary complaints in which an emetic is indicated.

While lobelia is most thorough in its operation, it is perhaps at the same time the mildest emetic known. This peculiarity in the medicine arises from the singular combination of agencies found in this article. Thus the conditions necessary to an easy operation, are always brought about, and the system is well prepared by the medicine itself (*if properly administered*.) before emesis takes place.

As the stimulating properties of the lobelia are extensively diffusive in their effects, it must be expected that the character of the attending symptoms, even when the medicine is administered in emetic doses, must vary, or at least correspond, with the condition of the system before the emetic was administered. When there is much vascular obstruction, or nervous irritability, the operation of the medicine is frequently attended with a variety of singular, but not always unpleasant symptoms, which are alarming to many who are unacquainted with the medicine. But the experienced physician does not regard those symptoms as particularly indicative of any unfavorable crisis, and when they occur, endeavors to moderate them only to quiet the unnecessary fears of bystanders. These effects are described as follows in "*Howard's Botanic Medicine*":—

"A diversity of symptoms attend the operation of lobelia emetics, evincing the magnitude of its powers and the surprising energy of its operation on the human system, which often terrify those who are unacquainted with its superior and astonishing influence in arresting diseased action, and restoring health and harmony to the human machine. Its effects are different on different individuals, and on the same individuals at different times. Sometimes there will be severe pain in the stomach and bowels; strange, agitated and indescribable, but not always unpleasant, sensations. Convulsive breathing, like the sobbing of a child. General distress, or universal sickning feeling. Sometimes perfectly easy and quiet, without the power to move hand or foot, or even of rolling the eyeballs in their sockets; and at other times great restlessness and anxiety, with symptoms of a most alarming character prevail. In some instances the countenance becomes pale, and the skin cold, with the appearance of approaching death;

whilst in others, the countenance assumes a florid appearance, bearing the marks of health."

The duration of these symptoms varies according to circumstances; but they generally last from thirty minutes to one or two hours; but have been known to last much longer. When an emetic is administered to persons inexperienced in the use of lobelia, the physician should always be present at its exhibition: for it has happened that persons, being frightened at the appearance of some of these symptoms, have sent for another physician, who, perhaps, just arrives and administers some simple article, as these symptoms begin to decline, and the reaction takes place; and thus the latter physician, to the prejudice of the former, gains much applause, although he could not have prevented the results for which he receives this credit.

In addition to these properties already named, lobelia possesses a number of others, also of great value, which will be considered in their proper places.

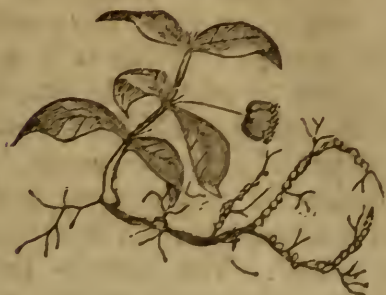
The officinal preparations of this medicine embrace the pulverized seed, the pulverized pods and leaves, the tincture prepared from the whole or any part of the plant, and oxymel of lobelia.

The dose of the seed, is from 15 to 30 grains; that of the pods and the leaves, is from 20 to 40 grains; and the tincture is generally used in table spoonful doses. In common practice, the medicine is used by measure; of the seed, commonly called *brown lobelia*, from one to three tea spoonfuls are generally used; the herb or pods and leaves, commonly called *green lobelia*, is used in doses of from two to four tea spoonfuls. The tincture is generally used in portions of a tea spoonful every ten or fifteen minutes, till it operates. The powder is commonly mixed up in a stimulating tea at about blood heat, and taken at three draughts, a third at a time, once in from ten to fifteen minutes. Should the emetic sicken and not operate, a drink of some astringent tea,* an alkali,† or some cayenne pepper tea, will generally bring about a speedy reaction.

*A decoction of the astringent tonic compound, is very good for this purpose.

†A half tea spoonful of soda or saleratus dissolved in warm water.

CEPHALIS IPECACUANHA.

*Ipecac.*

Sexual System.—Class 5; order 1.

Description.—Root perennial, from four to six inches in length, annulated, simple, or dividing into several branches descending obliquely into the ground, sending forth occasionally a few fibrils; it is when fresh, of a pale brown externally. The stem, sometimes partly under ground, is some two or three feet in length, somewhat shrubby though slender, and seldom rises more than a foot from the ground. It is of a brown ash-color, smooth, pubescent near the top, procumbent and knotty, issuing small radicals from the knots. The leaves are opposite, petiolate, oblong, ovate, acute, entire, from three to four inches in length, found on the ends of the stem and branches, and of not more than four or six in number. The axilla is beset with desiduous stipules embracing the stem. The flowers are small and white; the fruit or berry, which is at first purple, turns almost black when ripe.

Locality and habits.—This Ipecacuanha is a native of Brazil and New Grenada, delighting in thick and shady woods, and found in abundance in the vallies of the granite mountains, in the province of Rio Janeiro, and Lucas mountains of New Grenada. It flowers in January and February, and the fruit ripens in May.

Medical properties, and uses.—This article ranks next to *lobelia* as an emetic; its operation, like the latter, is mild but cer-

tain, and may be employed in all cases in which an emetic is indicated. It likewise possesses diaphoretic, stimulant, and expectorant powers, and hence is perhaps the best substitute for lobelia, in all cases in which the latter is useful. Many physicians are in the habit of combining this article with lobelia when they wish to exhibit an emetic, and consider the practice an improvement. When it is desired to administer an emetic to a patient of relaxed habits, it may perhaps be the best plan to use this compound, as it is not so apt to relax the patient as much as the lobelia does alone. By some, the Ipecac is strongly recommended in dysentery and chronic diarrhœa.

The mode of its administration is that of the powder suspended in warm water. The dose is from twenty to thirty grains, given in three separate portions, ten to fifteen minutes apart.

EUPHORBIA IPECACUANHA.

Spurge Ipecacuanha.

Sexual System.—Class 21; order 1.

Description.—There are several varieties of this species of plants, differing considerably, in the color as well as the shape of their leaves, which are found from the round to the lanceolate, or even the linear, and from green to crimson, and yet the difference is only that they are varieties of the same species, and are accordingly subdivided into 1, cespitosa; 2, prostrate; 3, rotundifolio; 4, lanceolate; 5, uniflora, &c. The root is perennial, of a yellowish color, irregular and large; growing in the sand sometimes to the size of a man's wrist, and from four to eight feet in length. The stems are numerous, erect or procumbent, smooth, dichotomous, jointed at the forks, and of a red, pale green, or yellow color. The leaves are opposite, sessile, entire, smooth, and vary in shape and color as above; are small in the spring, but grow in size with the age of the plant.

Locality and habits.—This plant is indigenous to this coun-

try, growing in pine barrens and other sandy places in the Middle and Southern States, in some places in considerable abundance, especially along the sea coast, in New Jersey, and on the banks of the Delaware. It is in bloom from May to August.

Medical properties and uses.—The *E. Ipecacuanha* is a pretty good emetic, and acts with considerable certainty. Like many other articles of this class, it has also something of a cathartic effect. But as an emetic, the *Euphorbia Ipecacuanha* is not so good as the foregoing, or *Cephalis Ipecacuanha*.

ERYTHRONIUM AMERICANUM.



Snake Leaf, Adder's Tongue, Snow-Drop, Dog-Tooth Violet, &c.

ERYTHRONIUM AMERICANUM.

Snake Leaf, Adder's Tongue, Snow-Drop, Dog-Tooth, Violet, &c.

Sexual System.—Class 6; order 1.

Description.—Root perennial, a solid pyriform bulb like all the lilies, and deep in the ground. It is white inside, and covered with a brown loose tunic, sheathing the base of the stem; fibres thick and short, inferior to the caudex. Stem partly under ground, white below, and greenish purple above the ground, and from five to ten inches long. The leaves, which are one or two in number, are lanceolate, smooth, sheathing at their base, and of a brownish green color, irregularly interspersed with darkish circular spots about a line in diameter. The flower is solitary, yellow, nodding; its petals lanceolate and reflected.

Locality and habits.—This beautiful plant is indigenous to this country, and grows in shady places, in meadows and low woods throughout the Northern and Middle States. It flowers in the latter part of April and first of May.

Medical properties and uses.—The bulb of the root and the leaf, used in the recent or green state, is a very good emetic. Several of them should be mashed and soaked in warm water, which may be drank at intervals of ten or fifteen minutes, until it operates. The whole plant is emollient, suppurative and anti-scorfulous. Its properties are impaired by drying or boiling, and finally entirely destroyed, except as a nutritive, by age. This article is much valued by some as an emetic, and more so by others as an anti-scorfulous remedy. But as an emetic, it is far inferior to lobelia and Ipecac, and is moreover much more inconvenient, as it must be used in its green state. For scrofula, and other ulcers, it is used in the form of a poultice..

SANGUINARIA CANADENSIS.



Blood root, Red Puccoon root, Indian Paint, &c.

Sexual System.—Class 13; order 1.

Description.—Root perennial, horizontal, fleshy, thick, and knobby, with some fibres. It is often contorted, about the

thickness of a finger, and from two to four inches in length. When broken or wounded, it pours out a beautiful red acrid juice, whence its name. The scape, and leaf stalks, which arise from the end of the root, are surrounded by the large sheaths of the bud. The leaf, beautifully enveloping the flower, rises about four to six inches high, when it expands into a large, cordate lobe, in shape like the *asarum canadense* or colt's foot. It is smooth, yellowish green on the upper surface—paler, and well furnished with nerves underneath.—Flower white, the petals of which are spreading, ovate, obtuse, and concave above. The plant comes up very early in the spring, and is in full bloom in a few days after it is up.

Locality and habits.—The *Blood root* is indigenous to this country, growing very plentifully in woodland and new grounds of rich soil, in almost every state in the Union.

Medical properties and uses.—The root of this plant is emetic in from ten to twenty grain doses of the powder. It is also cathartic, expectorant, escharotic, diaphoretic, and tonic. These other properties will be treated of in other places. It is most too harsh to be used in large doses. Its application is in those cases, generally, in which other emetics are indicated.

Although this article may be used as an emetic when articles better suited are not at hand, yet, when an article of this kind as good as the lobelia grows so plentifully, there is little necessity to preserve many others for this use.

In addition to the foregoing, there are many other articles which, although their most prominent properties are not emetic, will, nevertheless, act in this way when administered in large doses: These are:—

1. THOROUGHWORT, (*Eupatorium perfoliatum*.)—A strong decoction of the leaves and blossoms of this plant is emetic in wine glassful doses, taken once in ten to fifteen minutes. It produces free and copious vomiting and profuse perspiration, and is hence very good in fevers, catarrh and pneumonial affections.

2. VERVAIN, (*Verbena Hastata*.)—A strong decoction of the root and herb, is emetic, and very useful in intermittents, dyspepsia, &c.

3. ELDER, (*Sambucus Canadensis*.)—A decoction of the inner bark and flowers, taken plentifully, acts as an emetic; and is good in dropsies and fevers.

4. BLACK LOCUST, (*Robinia Pseudacacia*.)—The inner bark

of this tree possesses pretty active properties as an emetic, its operation being also generally prompt and mild. An ounce of the bark to a pint of boiling water, may be taken in reasonable doses, and at suitable intervals, until emesis takes place. It is recommended in the early stages of dysentery.

5. BLOOMING SPURGE, (*Euphorbia Corollata*.)—From ten to fifteen grains of the cuticle portion of the root, will operate as an emetic; but it is rather harsh in its operation.

6. LEATHER-WOOD, (*Dirca Palustris*.)—The bark of the root of this article is recommended as a good emetic in asthma, and intermittents. The dose is from five to ten grains of the pulverized bark of the root.

7. BAYBERRY, (*Myrica Cerifera*.)—The powder of the bark of the root, in large doses, is emetic, and is very good in cases of foul stomach.

8. BITTER DOGSBANE, (*Apocynum Androsæmifolium*.)—From twenty to thirty grains of the bark of the root, acts mildly but certainly as an emetic, and is useful in fevers and dyspepsia.

9. COMMON SALT (*Sodii Chloridum*.)—From one to three table spoonfuls, dissolved in warm water, and drank down, will operate speedily as an emetic, and is highly valued by some.

II. CATHARTICS.

Cathartics are agents which, in their action on the animal economy, have a specific tendency to evacuate the contents of the intestines downwards, or which, when given in proper doses, will excite purging.

As the direction of the intestinal tube from the stomach down, is not in every part in a course so as to favor the exit of its contents by the laws of gravitation, it is evident that a power separate from this, must ever be exerted when the contents move forward in their course. This force is called the *peristaltic motion*. This action produces in the mean about one alvine evacuation per day. Constipation, therefore, is the result of a want of activity in this motion, or mechanical resistance. The medical agencies that tend to increase the peristaltic motion, or remove its obstructions, are called cathartics. But this effect is not all that is involved in the operation of a good cathartic. The detraction of the serum and other humors, the diversion of the blood, the control of sympathy, the

general relaxation of the system, the general excitation of the secretions, &c., &c., are all influenced to a considerable extent, by the operation of this class of medicaments.

We find by Strabo, that this class of remedies was much in use, even in the earliest days of medicine. Thout, the Egyptian Hermes or Mercury, always regarded as the founder of medicine, seems to have practiced its use. Purges, vomits, and clysters, were used by the Egyptians for three days successively in every month. Besides the Egyptians, the Hebrews,* Assyrians, Greeks, Romans, Persians, Chinese, Hindoos, and Arabians, all practiced the use of cathartics.

But notwithstanding the popularity of this class of remedies, there has ever been a diversity of opinion as to the propriety or even the safety of their use. While some consider our materia medica imperfect without them, others declare them useless, nay, pernicious, and in many instances, rapidly fatal in their effects. Nor have the reformers done any thing to settle the controversy on this point, for there is even among them much difference of opinion as to the matter.

Dr. Thomson, from his settled conviction of the deplorable imperfections and dangers of the popular practice, was in his course of reform, led to guard well against the greater evils of that practice; and as this class of remedies of all others, have been the most abused, he in his zeal and enthusiasm, fell into the error of the opposite extreme. Having had on his mind the labors of an entire revolution in medicine, and being necessitated to frame his system without the advantages of even a good education, it is not at all strange that in some points he should deviate somewhat from a strictly philosophical course. There are still many in the ranks of reform who are quite ultra in their views on this matter; some declaring positively that no medicine of this class can ever be used without danger.

But the error on the other hand is no less marked; there are some who, without doubt, do much injury by their indiscriminate use. The *vis conservatrix* is but too often diverted by such interference from the fulfilment of better selected indications of cure; and thus by artificial intestinal irritation, the conservative powers are called, in numerous instances, from parts much exposed, and which, in consequence, are irreparably injured. Again, much purgation unquestionably produces direct debility of the digestive organs, causing dyspepsia and numerous other distressing evils. Instances not unfrequently occur in which the constitutions of patients are irretrievably

*The idea of cathartics is evinced in the prayer of the Psalmists—"Purge me with Hyssop."

destroyed by the improper use of cathartics. But does all this argue that catharsis is not a natural indication of cure? Does the abuse of an agent prove its uselessness? Catharsis is as certainly a true and natural indication of cure as emesis, diaphoresis, or any other; but it, like them, must be fulfilled in a proper way, and at a proper time. We must not condemn a medical agent, simply because given circumstances attending some of its applications are calculated to develop mischief. The question is, can such agents under *proper* circumstances, be found useful, or beneficial?

To settle this matter in the present instance, two kinds of evidence may be brought to bear; first, that gained from the physiological organization of the human economy; and secondly, that of our experience in the use of cathartics.

First, we discover that the respective functions of the vascular parts of the animal body, are governed by a compound agency evinced in the nervous system. We find that the sentient extremities of the nerves of these parts, are peculiarly sensitive to certain stimuli; and thus the stimulus of the blood excites the regular contractions of the heart and arteries, thereby sustaining the circulation:—That the lacteals are peculiarly sensitive to the chyle, which excites the fulfilment of the normal functions of these organs. The urinary bladder and uterus, answer their design in the economy of nature, by the influence of certain exciting stimuli. The intestines, according to the same law, are controlled in their functions on the same principle. The bile in the normal condition, seems to be the grand agent that sustains the peristaltic motion; but in the abnormal, we find it increased by excessive ingesta, the presence of irritating and offensive substances in the bowels, and various other causes. The question now arises,—is this a physiological or pathological action? This query is easily answered; and although this action is often attendant on diseased movement, yet, perhaps in this, as well as in numerous other instances, it can be traced as the legitimate effect of the *vis vitæ*, in the fulfilment of true and important indications of cure. Thus, we discover that living tissues and organs, are not only supplied with means subservient to their physiological uses in the animal economy, but are capable of self-defence; and, moreover, of removing destructive agents from the system: and it is certain, that among the five grand means of the exit of extraneous matter from the system, viz: *diaphoresis*, *catharsis*, *emesis*, *diuresis*, and *expectoration* or exhalation from the lungs, catharsis stands second in importance; the first being diaphoresis. Peccant matter in the diseased condition of the body, passes from the bowels in every evacuation from

these organs. The functions of the skin are no sooner disturbed than are the bowels found vicariously to fill the office of the cutaneous emunctuaries, the perspirable matter being taken up and conveyed directly to the bowels, and from thence expelled. The morbid accumulations that occur in the liver, are almost universally carried off by the bowels; and so are those, in many instances, that occur in the lungs. Even the urinary and uteral obstructions are sometimes relieved by increased intestinal action. Catharsis is one of the most common critical evacuations. How often it happens that our fevers end in spontaneous alvine evacuations. Nor is it less frequent that this indication is spontaneously answered in many other diseases.

In their organization, the relation existing between the intestines and the general vascular system, is of the most intimate character. When the bowels are full of nutritious matter, lymphatic absorption is active, and the arteries are rapidly supplied; but when food is sparingly taken, and the lacteals consequently inactive, we find that cutaneous absorption is much enhanced. When catharsis is instituted, the absorption from serous surfaces is always promoted in a corresponding ratio, and hence its utility in dropsies.

2d. The evidence that we gain on any point by experience, is, however, much more satisfactory than any other kind; and in this is found the strongest argument in favor of the use of cathartic medicines. It happens sometimes in obstinate fevers, that the usual means of relaxing & evacuating the system by the use of nauseants, emetics, diaphoretics, and vapor-baths, fail, and that in spite of them all the fever continues to rage, even after the exhibition of five or six courses of the medicines; and it seems sometimes as if the disease had gained violence, even from those powerful means themselves. And in such cases, the symptoms are often found to yield in a remarkable manner, to the use of proper cathartics. In bilious fevers it is often very difficult to succeed in the treatment without the use of this class of remedies. The writer has a knowledge of various instances, in which patients have been well treated by the usual courses of emetics and vapor, together with the free use of enemas, and after the patient had been treated for a week or two according to the most rigid plan of application, he instead of improving, gave evident signs of increasing danger. Under these circumstances, on the exhibition of a few small portions of *Pod. Peltatum* with capsicum, after several evacuations of very fœtid and dark stools, the patient began manifestly to improve.

In those cases it is evident that the hepatic derangement was alike beyond the reach of the emetics and enemas; and without doubt the condition of the small intestines may do much to enhance the obstinacy of such fevers. Indeed, it is almost universally the case, that the obstinacy of these fevers arises in consequence of a local inflammatory action, and which too, is frequently located in the *jejunum* and *ileum*, and thus often alike beyond the reach of emetics and enemas.

In dysenteries, cathartics are often of signal service. Astringents, and stimulating tonics, are generally used by those physicians who oppose the use of cathartics. But it is a fact which is corroborated by the experience of every practitioner, that although the astringent plan is in many cases successful, yet in some it is not sufficient; and again in others astringents alone extensively used are unsafe; for it often happens in these cases, that there may be excessive looseness, and violent tenesmus in the lower part of the bowels, while at the same time, there is constipation, or obstinate obstruction and consequent inflammation of the upper parts of the same. In such instances, therefore, there may be much injury done by instituting the use of astringents before the bowels are relieved from the constipation, for these medicines, instead of removing the dysentery in this case, spend their entire force on the parts already obstructed. Now, if in those cases a dose of *rheubarb* were first given, the astringents might have been used not only with impunity, but advantage. Nor are the mischievous consequences of the common practice of giving astringents alone in cases of dysentery, confined to those peculiarities already named; for as there is always in dysentery a vast accumulation of morbid and offensive matter, it is not best to stop the looseness, and contract the bowels, before cleansing them. This, in many instances, may and should by all means be done, by the use of enemas; but in some cases, cathartics seem indispensable.

Even in the extreme debility of typhus fever, instead of cathartics increasing the prostration, in some instances the patient has been known apparently, or in fact, to have gained strength from their continued use. This is indeed reasonable when the various conditions necessary to the developement of animal force are considered. For while the absolute source of force is found in the change of the relation of elementary principles in the organism, this force can only be brought to bear on the muscular arrangement, by the agency of the nervous system. When therefore the functions of the nerves are obstructed, it is evident that debility must be one of its legitimate results. Thus, when the irritation caused by the char-

acteristic morbid contents of the bowels in typhus is obviated or relieved, the debility will be remedied in a corresponding degree.

When poisonous substances are lodged in the intestines, it seems that the utility of cathartics can hardly be denied by any one.

It is, perhaps, unnecessary to particularize further on this point. But lest the writer should be misunderstood in his arguments in favor of this class of remedies, it may perhaps be necessary to be something more definite as to the extent to which cathartics should be used. It is important to remark that in this, as in the use of every other active and potent article of the materia medica, that particular attention is necessary to the quantity and character of the medicine, as well as to the circumstances that may attend its use. Very active and violent purgation is not only unnecessary, but should ever be regarded as a pernicious practice. Laxatives and mild cathartics are all that may be necessary in this class, to the cure of disease; and there is perhaps more difference in mildness and efficiency between the numerous articles of this class, than any other.

PODOPHYLLUM PELTATUM.



Mandrake, May Apple.

Sexual System.—Class 13; order 1.

Description.—The root is perennial, creeping, usually several feet in length, jointed, round, brown without and white within, and about the thickness of a pipe-stem; the joints and under side of the root is beset with slender fibres. The stem is erect, round, smooth, about a foot in height, and the bearing stalks divided at the top, bearing the flower and fruit in the fork. The branches bear each of them a large peltate, palmate leaf, slightly lobed. The flower is nodding and white.

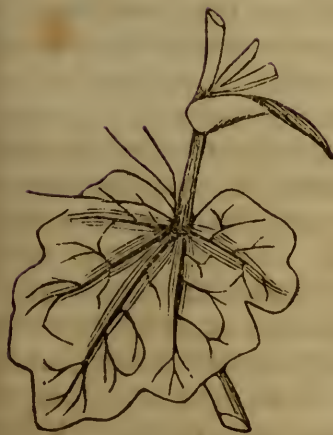
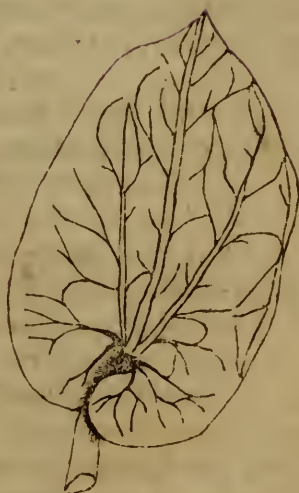
Locality and habits.—The May apple is indigenous to this country, growing in a rich soil, in the woods, new grounds, and on the road side; but delighting most in moist and slightly shaded grounds. The flowers appear in May, whence one of its vulgar names, and the fruit ripens in August.

Medical properties and uses.—The root, properly prepared, is perhaps the best cathartic now known; being very mild, and although somewhat slow, yet certain in its operation. It is alterative in its effects, and seems to have a considerable tendency to the glandular system, especially to the liver, on which its effects are as thorough as dare be claimed for mercury, and yet it is perfectly safe, and not like it, calculated to exhaust or pervert the tone of this organ. In fevers, especially those of a bilious and intermittent character, and all scrofulous affections and diseases of the skin, it is of incomparable utility. It, unlike most other articles of this class, leaves the bowels in a lax and soluble condition, and hence is in many instances, very useful in habitual costiveness. It possesses also in some degree, a diuretic property; and is an excellent article in the cure of hydrocephalus, hydrothorax, and indeed in all other forms of dropsy. All will readily anticipate its usefulness in jaundice, and hypertrophy of the liver and spleen, so common in intermittents.

Dr. Bigelow in speaking of this valuable article, says:—"The medical properties of the *podophyllum peltatum*, are those of a sure and active cathartic; in which character it deserves a high rank among our indigenous productions. We have hardly any native plant which answers better the common purposes of jalap, aloes, and rhubarb."

The leaves, stem, and fresh shoots of the plant seem to be poisonous; and indeed the root itself, in its recent or green state, is very violent and dangerous in its effects. But in drying it, these violent properties are all dissipated, and the medicine, when prepared from the solid part of the root, scraped and well dried, and about a year old, is in proper doses perfectly mild and harmless. The dose is from ten to twenty grains of the powder. But the alcoholic extract is by far the best preparation of this article. In this we have at least the advantage of the smallness of the dose, if nothing more; but it seems likewise to agree better with the stomach when prepared in this way. To make this extract, it is only necessary to make a strong tincture of the medicine in this menstruum, and then after filtering, or decanting it carefully, evaporating the alcohol, either with or without heat. By the use of a des-til, the alcohol may be preserved for another process. The dose of the extract is from three to eight grains.

RHEUM.

*Rheum Palmatum.**Rheum Compactum.**Rheum Emodi.*

Sexual System—Class 9; order 3.

Rheubarb has been in use for a long time, and still it has not yet been ascertained by the profession, what species of the *Rheum* yields the officinal rheubarb. The remoteness of

the country where it is collected, and the jealous care by which the monopoly of the trade of this article is guarded, has been effectual in retaining the secret. There are several species now cultivated in this country. Dr. Pereira mentions thirteen species: viz. *R. Palmatum*, *undulatum*, *compactum*, *rhaponticum*, *emodi*, *crassinervium*, *capsicum*, *tataricum*, *hybridum*, *confluence*, *fischeri*, *barbandifolium*, and *bullatum*; the specimens of which were in his possession. Besides these we have accounts of several others, such as the *R. australe*, *leucorrhizon*, *webbianum*, *spiciforme*, and *moorcroftianum*.

There are however but few varieties of the article now in common use; these are articles of commerce, and are bought under the names of 1, *Chinese Rhubarb*; 2, *Russian Rhubarb*; 3, *European Rhubarb*. Of these, the Russian, which is sometimes called Turkey Rhubarb, (owing to the fact that it was formerly derived from the Turkish ports, whither it was brought from Tartary,) is entirely the best, and next to this, is the Chinese.

Rhubarb should always be purchased in the root, and that selected which possesses an agreeable aromatic odor, and is heaviest, of a lively color, and which when broken presents a fresh appearance with red and yellowish veins intermingled with white, and that also has a bitter astringent taste, staining the saliva of a deep yellow when chewed.

Medical Properties and Uses.—Rhubarb is one of our most valuable medicines; in it we find a singular combination of two properties, which in their effects are of an opposite character, the cathartic and the astringent. But when the medicine is taken these properties do not exhibit their several effects at the same time; the cathartic power is always exhausted before the other takes effect. This circumstance is what so eminently adapts this medicine to the treatment of dysentery, cholera infantum and cholera morbus. Rhubarb is likewise very good in the diarrhœa that often attends dyspepsia, and the last stages of consumption. It is very mild in its operation as a cathartic, and is not apt to produce watery discharges, but rather such as are of a fecal character.

Rhubarb is recommended by authors in cases of habitual constipation attending dyspepsia; but as will readily appear to a thinking individual, it certainly is illy adapted to such cases, in view of its astringent qualities, which always leave the bowels in a confined condition. It may however be relied upon in all cases in which a medicine like this is indicated, as it is certain and mild, and unless given in over doses will always be agreeable to the stomach.

The medicine yields its properties most readily to water and wine. When therefore it is not given in substance the infusion should be used. Its properties are not well adapted to extraction, as the dose of this must necessarily be half the size of that of the powders, which latter is from 10 to 20 grains, or from one to two teaspoonfuls.

JUGLANS CINEREA.

Butternut, Oilnut, White Walnut.

Sexual System—Class 21; order 7.

Description.—The *white walnut*, is an indigenous forest tree of considerable size. The young branches are of a whitish-grey color, whence the name, white walnut; are smooth, and in their situation incline to a horizontal position. The leaves are long, lanceolate, serrate, and are finate, or arranged in pairs seven or eight in number, with a terminal one on the end of the petiole, like the *locust*. As this is a very common tree, further description is unnecessary.

Locality and habits.—This useful tree grows in every part of the U. States, and Canadas; most abundant on rich lands. It flowers in May and the fruit ripens in September.

Medical properties and uses.—The extract made from the inner bark of the root and trunk of this tree, is an excellent cathartic, operating without pain or griping, and evacuating the alimentary canal without depletion. It has been used for a long time, and was highly recommended by Dr. Rush among the soldiers during the Revolutionary War. The extract may be formed into pills with a small portion of *capsicum* and used in all cases in which cathartics are indicated. The extract when of the consistence of molasses serves well as a material for forming *pill mass*, from dry articles.

LEPTANDRIA VIRGINICA.



Black root, Bowman root, Brinton root, Culver's physic, &c.

Sexual System—Class 2; order 1.

Description.—Root perennial, long, woody, beset with numerous long slender fibres, and of a blackish brown color without. Stems several, upright, round, slightly pubescent, and from two to four feet high. The leaves are long, lanceolate, serrate, and are arranged in whorls around the stem, four to six at a joint, which latter are about a hand's-breadth apart. Flowers white, small, numerous, constituting from three to five terminal racemes.

Locality and habits.—The black root is indigenous to this country, and is found throughout the Western and Middle States, growing on low grounds or moist places, in meadows, along fences, &c. It flowers in the latter part of July and first of August.

Medical properties und uses.—This is a pretty good cathartic, and operates with considerable certainty and mildness. It has been in high repute among the Aborigines of this country, who used it in fevers and disorders of the stomach and bowels. As several of its vulgar names indicate, it has been a favorite of several individuals of the profession. It is spoken of in Howard's Botanic Medicine, as follows:

"The black root is very highly celebrated by those best acquainted with its virtues and effects, as an efficient purge, operating with mildness and certainty, without producing that depression of the living powers, so common to other purgative medicines. In typhus and bilious fevers, it removes the black, tarry, morbid matter from the intestines, which it seems so necessary to be carried off by some means or other, and does it in a most natural manner, without weakening the tone of the bowels, or leaving behind it the poisonous sting so often remaining after the use of calomel, the most universal cathartic in fevers. The black root is also a diaphoretic, antiseptic, and tonic. It may be taken in doses of a heaping teaspoonful, in half a gill of boiling water, sweetened if most agreeable, and repeated in three hours if it does not operate."

This article as a cathartic is however not as valuable as the first named in this class of remedies.

IPOMÆA JALAPA.

*Jalop.*

Sexual System—Class 5; order 1.

Description.—Nuttall gives the following description of this article:—"The root of this plant is a roundish, somewhat pear-shaped tuber, externally blackish, internally white, with long fibres proceeding from its lower part as well as from its upper root-stalks. A tuber produced by Dr. Coxe was, in its third year, between two and three inches in diameter. The stem is round, smooth, much disposed to twist, and rises to a considerable height upon neighboring objects, about which it twines. The leaves are heart-shaped, entire, smooth, pointed; deeply sinuated at the base, prominently veined on their under surface, and supported upon long footstalks. The lower leaves are nearly hastate, or with diverging angular points. The flowers, which are large and of a lilac purple color, stand upon peduncles about as long as the petioles. Each peduncle supports two, or more rarely, three flowers."

Locality and habits.—This plant is a native of Mexico, and derived its name from the city of Xalapa in the State of Vera Cruz, on the neighboring mountains of which, it grows sometimes at the height of 6000 feet above the ocean.

Medical properties and uses.—Jalap is an active cathartic, too much so for common use; it is, however, much used by the practitioners of the Worthington school, and Dr. Beach recommends it highly as an anti-bilious cathartic, and makes use of it in several compounds. This is one of the most common articles of this class in use in the fashionable practice; it is commonly prescribed with calomel, thus "Calomel and Jalap" is a very fashionable name. This article, however, properly belongs to the Botanical Materia Medica, although it is not so valuable as many other cathartics. It is a powerful hydrogogue, producing copious watery discharges, and hence may be used in dropsies, &c. The dose is from 20 to 40 grains of the powder.

ALOE.

Aloes.

Sexual System—Class 6; order 1.

Description.—The perfoliate or socotrine aloes is among the most important species, and is described by Lindley as having a woody stem, straight, and naked below, considerably marked with the scars of leaves. Leaves amplexicaul, ascending, ensiform, green, curved inwards at the point, convex below, rather concave above, marked with numerous small white marginal serratures, the parenchyma abounding in a bright brownish yellow juice. Raceme cylindrical, unbranched.—Flowers scarlet at the base, pale in the middle, green at the point.

This is the kind of aloes commonly called *socotrine*, so named from the name of an Island lying in the Indian Ocean. But it is difficult to get the genuine article, as its superiority gives occasion to the practice of fraud. It is justly said by Dr. Wood that much of the aloes sold as socotrine, has never seen the island of Socotra, nor even the Indian seas. It has been customary to affix this title as a mark of superior value

to those parcels of the drug, from whatever source they may have been derived, which have been prepared with unusual care, and are supposed to be of the best quality. Thus, both in Spain and the West Indies, the juice which is obtained without expression, and inspissated in the sun without artificial heat, has been called Socotrine aloes.

Besides the aloe *perfoliata* or *socotrina*, we have other yielding species, *spicata*, *vulgaris*, *aborescens*, *commelyni*, and *multiformis*, which are all natives of the Cape of Good Hope, and are commonly called Cafre aloes; and with these we have still others, viz: the Barbadoes, Indian, Mocha, and the Cabaline.

The Barbadoes, commonly called hepatic aloes, from its resemblance to the color of the liver, comes to us in large gourd-shells, and is a pretty good medicine, and when the socotrine cannot be procured this may be substituted for it.

India aloes is, perhaps, only an inferior article of the same kind as the Barbadoes. Of this there are however several varieties; 1, that of Northern India, which is of a dull black color, is brittle, and has but a faint odor; 2, that from Guzerat, which is more gummy in its appearance and feel, and is more difficult to fracture; 3, that from Salem, which is distinguished from the other varieties by the numerous large air cavities observed in the interior of the mass—its odor is similar to the socotrine; 4, that from Trichinopli, which resembles the Cafre aloes in bitterness, odor, and color, but is more opaque.

The Mocha aloes is a dirty mixture, which is of late imported from Muscat, in chests containing nearly two cwt. each.

The Cabalina or horse aloes, in appearance resembles the hepatic in color and consistence, but has a very rank and unpleasant smell. It is often sold for hepatic aloes, but is much inferior to it, and is now not much used, except by farriers among horses.

In selecting aloes for medical use, that should be taken which has an agreeable aromatic smell, and a regular semi-transparent and shining appearance, and if it be soft it is no matter, but it should always be clean from foreign impurities. The best is always brought in skins and shells. The Socotrine should always be preferred.

Medical properties and uses.—Aloes is a very certain but slow cathartic. Its stimulating and tonic properties are well calculated to sustain the system during the operation of the medicine. Like the bile, this article seems to have a specific tendency to excite the peristaltic motion, as it little effects the exhalent vessels; the discharges it produces being generally

not very thin, but consisting chiefly of fecal matter and other materials that may be found in the intestines at the time of its exhibition. It seems to act most prominently on the large intestines, sometimes giving rise to some irritation in these parts, and hence, when its use is long continued at a time, it has been known to produce piles. This effect, however, seldom arises from the use of the genuine socotrine aloes. A singularity about this medicine is, that an increase of quantity beyond the proper dose, does not seem to be attended with a corresponding increase of its action. Aloes also possesses an emenagogue power of considerable value.

The cases in which this medicine is most strongly indicated are, loss of appetite, dyspepsia, constipation, intermittents, amenorrhœa, intestinal worms, want of biliary secretion, &c. The dose is from 5 to 10 grains, which will generally operate in from 12 to 24 hours. Its action can be somewhat quickened by using with it other articles of more activity. Owing to its extremely bitter taste, it is best administered in pill form, two of which will generally be sufficient for a dose.

RICINUS COMMUNIS.

Castor oil plant.

Sexual System—Class 21; order 8.

Description.—This plant, which is sometimes called *palma christi*, is a native of the Indies, where it grows sometimes to the height of 30 to 40 feet, but it is now cultivated in almost every part of the world. As cultivated in this country it seldom grows larger than from five to ten feet in height.

That cultivated in this country will bear the following description:—The plant is of vigorous growth; stem erect, round, hollow, smooth, branching, and something of a purpleish hue towards the top, somewhat resembling the *phytolacca decandra* or *poke*. The leaf is large, peltate, palmate, serrate, smooth, and of a bluish green color. The flowers are monœcious and destitute of a corolla, constituting a knotty pyramidal, terminal raceme. The pod is glucious, and of a roundish shape,

having three projecting sides, and is covered with tough spines. It is divided into three cells each, containing a seed of the size of a grain of coffee, which produces the oil.

Castor Oil is a medicine of great antiquity; it was used by Hippocrates and others of his day, and it is now one of the most common articles of the cathartic kind in use. Dr. Eberle states:—"Castor oil is very mild, unirritating, but a certain and prompt cathartic, procuring copious fæcal evacuations, without appearing to excite the intestinal emunctuaries, since it hardly ever occasions any very liquid or watery discharges. Where we wish simply to evacuate the contents of the bowels, or avoid costiveness, there is no article belonging to this class of remedies so well adapted as castor oil to answer our intentions. Independent of the mildness and completeness of its operation, it is less apt than any other cathartic to leave the bowels in a dry or costive condition."* Many other old school writers have spoken equally favorable of this article, and among Botanical Physicians there are many who use it; yet there certainly are numerous other articles of this class much better than this. It is true that it is prompt and sure in its operation, but, although authors claim for it great mildness, yet it is certain that its effects are more or less injurious to the digestive organs, and that occasionally considerable violence attends its use;† and when the most is said in its favor, it cannot be claimed that its medicinal effects extend much beyond the limits of the intestinal canal.

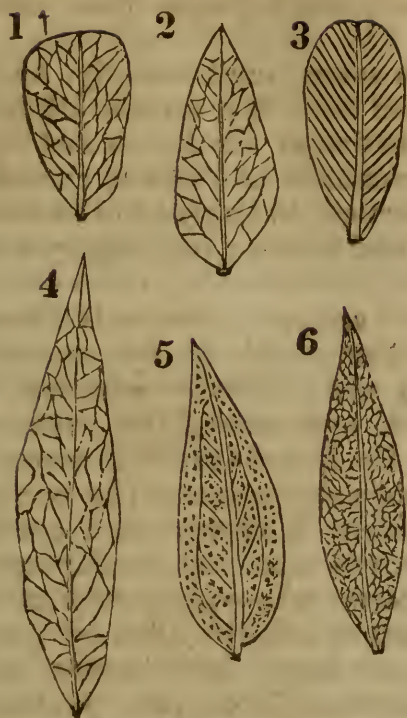
The chief use of this article as a medicine, is found in its adaptation to the removal from the intestines, any irritating or offensive accumulations, or poison that may be taken, as it produces but little disturbance in any other part of the system, and is moreover very active in its effects, operating sometimes in the course of one hour from the time it is taken. It serves as a vehicle in the use of the chenopodium anthelminticum or wormseed oil.

One of the greatest inconveniences in the use of this article, is the difficulty attending its administration, owing to its nauseous and disagreeable taste and smell, which to some is very disgusting. The best way to obviate this is to take it in a little wine, cider, or coffee. The writer has used this article but very little in practice, but it is considerably recommended by Dr. J. Thomson, in the thirteenth edition of the *New Guide to Health*,

* *Therapeutics*, page 129.

† This may, however, arise from impurities in the article, which are so often met with.

CASSIA.

*Senna.*

Sexual System—Class 10; order 1.

Description.—There are several species of the *cassia* that contribute in furnishing the drug of commerce. As we find the senna in market, it is named according to the country from whence it is brought; hence we have the *Alexandria*, the *Tripoli*, and the *India* senna.

The senna brought from Alexandria, embraces some three or four species, the *c. acutifolia*, *c. obovata*, *c. cynanchum* *c. oleæfolium*, and the *c. tephrosia apollinea*.

† Fig. 1, is a specimen leaf of the ovate leaved Alexandria senna. 2. Specimen of the acute variety of the same. 3. Specimen of the Tephrosia or silver leaved Alexandria senna. 4. Specimen of the India or Trinnevelly senna. 5. Specimen leaf of the *Coriaria myrtifolia*,—an article with which senna is sometimes adulterated. These leaves are of a greyish-green color, and are tinged with blue. They have three parallel nerves, one prominent one in the centre, and one on each side between this and the edge or margin of the leaf. 6. A specimen leaf of the *Cynancum oleæfolium* or argel,—a variety of the Alexandrian senna.

The Tripoli senna consists of only one species, the *Æthiopica*.

The India senna* consists chiefly of the *cassia elongata*; the leaves of which are much longer than either of the above named.

The Alexandria senna, until recently, has been considered the best for medical use. But a finer article of *India senna*, which is the production of Hindostan and cultivated at Trinnevelly is now brought to us which is considered superior to all others. This article, in England, is known under the name *Trinnevelly senna* and is there very highly esteemed.

Medical properties and uses.—Senna is a prompt and efficient cathartic, but is objectionable on the account of its tendency to produce griping and pain in its operation. This may, however, be obviated to some extent, by combining with it some aromatic, such as the fennel seed. It seems that the effects of senna are considerably improved by combination with bitters, and as the article is chiefly used among children, this hint may be improved upon by combining with it an equal quantity of *peach leaves*, whose properties are of known utility.

Although this article is much used by physicians yet it is certain that there are many other articles much better than this. As a general thing, little more is claimed in its favor than promptness of operation as a cathartic. But what does this itself argue? Cathartics possess special value only in the proportion of the power of fulfilling many and important indications of cure. Those articles which simply remove the contents of the bowels, without producing any other impression, are comparatively of little value.

By Reformers, senna is chiefly used in combination with pink root, for the removal of intestinal worms. The dose is from half a drachm to two drachms. When given by infusion, which is the best way, a half an ounce is scalded with an ounce of manna, and a drachm of fennel seed to a half pint of water. Take a third ounce in four hours 'till it operates.

* This article is produced in Arabia, and derives its name *India*, only from the rout by which it reaches us.

IRIS VERSICOLOR.

Blue flag, Snake lily, &c.

Sexual System—Class 3: order 1.

Description.—Root perennial, horizontal, fleshy, fibrous.—Stem two to three feet high, round on one side, acute on the other, and sometimes branched. Leaves sword-shaped, striated, sheathing at the bottom. Flowers from two to six in number and of a blue color.

Locality and habits.—This beautiful plant grows all over the United States, in low wet places, in meadows and borders of swamps. It flowers in June.

Medical properties and uses.—The blue flag is an active cathartic, and in over doses, is emetic; it is also diuretic. This medicine is too harsh for common use, but from its adaption to several obstinate diseases it well merits a place in our *materia medica*. It is perhaps one of our best remedies in venereal affections; its action is searching, and powerful on the glandular system. It enters into and is the basis of Dr. Smith's Anti-mercurial syrup, which is held in high estimation, by some, in mercurial and venereal affections. The medicine is also useful in dropsy, and in scrofulous complaints. It is highly recommended in colic, and also in liver complaints. The dose of the powdered root is from 8 to 15 grains.

SAMBUCUS CANADENSIS.

Elder, Sweet Elder, Black Elder &c.

Sexual System—Class 5. order 3.

The elder is a very common indigenous shrub, and needs no further description.

Medical properties and uses.—The inner bark and young leaf buds are a pretty active cathartic of a hydragogue character, & being actively diuretic are very good in dropsy. For this use, a handful is usually stewed in a pint of cider, and drank at suitable intervals, in wine glassful doses. The bark is also sometimes made into an ointment, for cutaneous affections. The flowers are much used in families, for children, and the berries are recommended in rheumatism.

APOCYNUM ANDROCÆMIFOLIUM.



Bitter dogs-bane, Bitter-root, Wandering milk weed, Honey bloom, Wild buckwheat, Fly trap, &c.

Sexual System—Class 5; order 2.

Description.—Root perennial, long, horizontal, creeping, having a thick fleshy bark, with a woody centre, and tasting at first somewhat like the root of the *asclepius tuberosa*, but afterwards intensely bitter. Stem erect, smooth, and about two to four feet in height. The leaves are opposite, petiolate, ovate, acute, entire, two to three inches long, and smooth.—

Flowers white, tinged with red, and disposed on loose nodding axillary racemes. Fruit, a pair of long slender and tapering follicles or pods, containing the seeds and seed-down. The whole plant when wounded exudes a milky juice.

Locality and habits.—The dogs-bane grows most abundantly in low wetish or meadow lands, but is occasionally found on uplands. It is common throughout the U. States. Its flowering time is in June and July.

Medical properties and uses.—The bark of the root is an excellent laxative, bitter-tonic, strengthening the digestive organs, and regulating the bowels, and is highly useful in dyspepsia, liver complaints, intermittents, jaundice, &c. It is also useful in syphilis. The dose, as a laxative, is from 10 to 15 grains. In large doses it proves emetic, and actively cathartic. Age impairs its virtues.

AMYGDALUS PERSICA.

Peach tree.

Sexual System—Class 12; order 1.

The peach tree needs no further description.

Medical properties and uses.—The leaves, flowers, and buds of the peach tree, are cathartic or laxative, and tonic, and are much used in domestic practice, especially among children. They are good for worms, bowel-complaints, loss of appetite, and constipation of the bowels. The fruit or peach, is boiled for the convalescent, as food; the juice is very good to keep the bowels open during recovery, and is excellent to promote the appetite of the sick. The kernels are a good tonic, in dyspepsia, and for a weak stomach and bowels.

An infusion of the leaves is very good for urinary difficulties, especially for inflammation of the bladder. Dr. Thomson esteemed the medical properties of the kernels very highly; they enter into his restorative syrup No. 5.

CONVOLVULUS PANDURATUS.

American Jalap, Man root, Man-in-the-ground, Wild Potatoe, Wild morning glory, Cussander, &c

Sexual System—Class 5: order 1.

Description.—*Root* perennial, very large, and in shape, of a fancied resemblance of a man, whence some of its names.—It runs deep into the ground, growing larger as it descends, to sometimes two feet, when it again tapers off. The root is sometimes found eight to ten inches in diameter, and three feet in length. The stalk is a slender, herbaceous, climbing vine, often from eight to twelve feet long. The leaves, which are situated alternately with long petioles on the vine, are broad, heart-shaped at the base, entire, and of a deep green color. The flowers resemble the morning glory, are white at the border, but purplish-red at the base, and stand on long axillary peduncles.

Locality and habits.—This plant grows throughout this country, in sandy grounds, along fences, and in pasture fields. It flowers from June to August.

Medical properties and uses.—The American jalap is mildly cathartic, diuretic, and tonic. Its laxative properties adapt it well to the relief of habitual costiveness, dyspepsia, liver complaints, &c. It is also very good in lung affections, being somewhat expectorant. It relieves whooping cough and asthma, and has proved serviceable in consumption. The dose is from 20 to 30 grains of the powder, but is best used in extract; of which the dose is from five to ten grains. This article will cure the colt distemper, among horses.

III. ANTHELMINTICS.

Anthelmintics are medicines which have the power either to destroy or expel worms, or prevent their generation in the intestinal canal. Some of these remedies act as poisons to the animals, others destroy them by mechanical action, and again others simply by their purging power, expel them alive; and finally we find others, which, by their action on the system, so dispose the physiological condition of the parts infected with them, as to prevent their generation.

Special Anthelmintics.

SPIGELIA MARILANDICA.

Pink Root; Carolina Pink, Indian Pink.

Sexual System—Class 5; order 1.

Description.—Root perennial, yellow, and very fibrous. Stems, several to the root, simple, erect, foursided, and from a foot to a foot and a half in height. The leaves are opposite, sessile, ovate, lanceolate, entire, and smooth. The flowers are very handsome, of a bright scarlet outside, and yellow within; they are about an inch long, and have a tube swelled in the middle, and are disposed in terminal racemes.

Locality and habits.—The pinkroot grows plentifully in Maryland, the Carolinas, Kentucky, and Florida. It grows in rich soil on the borders of woods, and blossoms in June and July.

Medical properties and uses.—The root of this plant is a valuable vermifuge, but its anthelmintic properties seem best adapted to the expulsion of the long round worm. Its effects are certain in this species of worms, which is the most common in this country; but it cannot be depended on, in the removal of any other kind. The medicine should be used for a day or two, in proper doses, and should then be followed

by a brisk cathartic. The dose of the powdered root, for a child three or four years old, is from ten to twenty grains. For an adult, the dose is from one to two drachms, three times a day. The most common form of its use, however, is in the form of infusion. Half an ounce of the root, boiled in a pint of water for several hours, and given in doses of from a table-spoonful to an ounce, to a child two or three years old; for an adult, from a quarter to half a pint is a proper dose. The medicine is sometimes given in connexion with a cathartic; and for this purpose senna is most generally used, but the better way is to give the pink root first and then the cathartic.

CHENOPODIUM ANTHELMINTICUM.

Wormseed, Jerusalem Oak, Goosefoot, &c.

Sexual System—Class 5; order 2.

Description.—The chenopodium anthelminticum is an indigenous perennial plant, with an herbaceous, erect, branching furrowed stem, which grows from two to three feet high. The leaves are scattered; sessile, oblong, lanceolate, pointed at both ends, dentate, and prominently veined. The flowers are numerous, small, and of the same color with the leaves, or stems.

Locality and habits.—This plant is found in every part of this country, growing plentifully around dooryards, in old fields, and by the road sides. It flowers in June and July. The whole plant has a strong scent, very offensive to some, being that of the oil.

There is another species of the chenopodium, the ambrosioides, which very closely resembles this, but it does not grow so large, and may be known moreover, by the difference in the racemes, which, in the ambrosioides, is interspersed with small leaves. It is stated by Eberle, that the latter is nearly as good an anthelmintic as the former.

Medical properties and uses.—The wormseed, as it is commonly called, is one of our best anthelmintics. The oil, which

is the usual form in which the medicine is used, may be given in doses of from three to eight drops to a child two or three years old. The dose should be repeated two to three times a day, for two days, when it should be followed by an active cathartic. For this purpose, castor oil is commonly used.—Wormseed oil is often combined, by physicians, with castor oil, and put up in ounce phials, and sold as a popular vermifuge. For the preparation of these see dispensatory.

POLYPODIUM FELIX MAS.

Male Fern, Male shield Fern, &c.

Sexual System—Class 24. order 1—*filices*.

Description.—Root perennial, horizontal, fibrous, and is surrounded by the thickened bases of the curved footstalks, which overlap each other in their oblique position around the rhizoma. The foot-stalks or stipe, and mid-rib are covered with brownish, transparent scales. The frond or compound leaf is of an oval, lanceolate, acute, pinate, form; the pinnæ or leaflets are situated remotely below, but stand nearer together toward the top, and at the summit seem crowded. They are lobed, and of an oval shape, and are the seat of fructification. The general aspect of this plant is much like that of all the ferns; it grows in tufts or bunches, and is found in pine woods, in New Jersey, and Virginia.

Medical properties and uses.—The male fern is actively anthelmintic, and has gained for itself a great character. It was used by Theophrastus and Galen, who prescribed it against tœnia and lumbicoides. The great secret purchased* by Louis XV. of France, from Madame Nouffer, consisted chiefly of this article. The medicine is now in considerable use among many physicians, and is generally regarded as a prompt and efficient vermifuge, especially in the removal of the tape worm. The dose of the powdered roots and radical portions of the stipes, is about three drachms, to be given in emulsion or electuary. The dose should be repeated morning and evening for several days, and then followed with a brisk cathartic.

*The price paid for this no. tram was 18,000 francs.

PUNICA GRANATUM.

Pomegranate.

Sexual System—Class 12: order 1.

Description.—"The pomegranate is a small shrubby tree attaining in favorable situations the height of twenty feet, with a very unequal trunk, and numerous branches, which sometimes bear thorns. The leaves are opposite, entire, oblong or lance-shaped, pointed at each end, smooth, shining, of a bright green color, and stand at the ends of the young branches.—The petals are roundish and wrinkled, and are inserted into the upper part of the tube of the calyx, which is red, thick and fleshy. The fruit is a globular berry something larger than an orange, crowned with the calyx, covered with a reddish, yellow, thick, coriaceous rind, and divided internally into many cells; which contain an acidulous pulb, and numerous oblong, angular seeds."

Locality and habits.—"This tree grows wild upon both shores of the Mediterranean, in Arabia, Persia, Bengal, China, and Japan, has been introduced into the East and West Indies, and is cultivated in all civilized countries where the climate is sufficiently warm to allow the fruit to ripen. In higher latitudes where it does not bear fruit, it is raised in gardens and hot-houses for the beauty of its flowers, which become double and acquire increased splendor of colouring by cultivation. Doubts have been entertained as to its original country. The name of 'Punicum Malum,' applied by the ancients to its fruit, implies that it was abundant at an early age in the neighborhood of Carthage. The fruit of the pomegranate, for which the plant is cultivated in tropical climates, varies much in size and flavour. It is said to attain greater perfection in both these respects in the West Indies, than in its native country."—*U. S. Dispensatory.*

Medical properties and uses.—The bark of the root of this tree is a very ancient remedy for the tape worm, and it is now in extensive use as an anthelmintic, in Hindostan, Germany, Switzerland, and France. It may be administered in powder

or decoction: the decoction is made by macerating two ounces of the bruised bark in a quart of water for some 24 hours, and then boiling down to a pint. The dose of this is a wine-glassful, taken in from one to two or three hours, until the whole is taken. The dose of the powder is from one to two drachms, once in two hours till five or six doses are taken.—The medicine, when used as an anthelmintic, should always be followed on the second day, by a good dose of oil or mandrake.

The pomegranate bark is also astringent and tonic; and is classed among these by some writers.

PRIDE OF CHINA, (*Melia Azedarach*.)—This beautiful tree, which is now cultivated in the southern part of our country, affords a very good medicine of the anthelmintic class. The fresh bark of the root, and the berries are the parts used. A handful of the bark is prepared in decoction, and given once in a few hours till it effects the bowels, or it may be given in proper doses several times a day, and then be followed with a cathartic. The medicine in large doses, is emetic and cathartic.

COWHAGE, (*Dolichos Puricens*.)—The hairs produced by the pods of this plant, are an excellent anthelmintic. Their operation is mechanical, destroying the animals by piercing them as with so many spears. They appear to be alike effectual in the removal of all kinds of worms; and there seems to be no danger in their use, as the alimentary canal is completely protected against their harm, by the mucous membrane. The dose is a teaspoonful of molasses, thickened with those hairs, morning and evening, for three or four days, and then followed with a cathartic. The dose for an adult is a tablespoonful of the compound, taken in the same manner.

OIL OF TURPENTINE, (*Oleum Terbinthinæ*.)—The oil or even the spirits of turpentine is actively anthelmintic, but the medicine is rather harsh, and should not be used while articles more mild and equally efficient are to be had. The dose of the oil as an anthelmintic is about a teaspoonful for an adult, but has been administered in much larger doses, even to the amount of one or two ounces in some cases of tape-worm.—When used, the medicine should be given at a single dose, and soon followed with a full dose of castor oil.

There are many other articles that are recommended as being good to destroy and expel worms. The Cabbage-tree (*Geoffræa Inermis*.) Tartarian southernwood (*Artemisia Santonica*.) Camphor; the bark of the Yellow Poplar (*Lirioden-*

dron Tulipifera,) &c., are all active anthelmintics, and have their advocates. But the best medicines against worms are the bitter tonics, which act by a double advantage. Bitters, while they are offensive to worms, are equally effectual in obviating that condition of the digestive organs which is favorable to their production. A persevering use of the bark of any of the poplars, the wormwood, chammomile, or almost any other bitter article will effectually evacuate the system of worms.

CHAPTER II.

Medicines affecting most prominently the respiratory organs.

I. EXPECTORANTS.

These are medicines which in their effects promote the bronchial secretions, and favor their exit from the system by expectoration. Their use in consumption, peripneumonia, pleurisy, whooping-cough, asthma, croup, &c., is well known.

Special Expectorants.

LOBELIA.

Lobelia, in addition to its valuable emetic and relaxant properties, also proves itself one of the best expectorants now known to the profession. Few cases occur in medical practice, in which this article will not fulfil the ordinary indications of the use of expectorants; and in difficult cases, there is perhaps no article that will answer a better purpose. The almost uncontrollable agency that this article possesses, in equalizing the circulation, makes it actively antiphlogistic, while its physiologically stimulating effects, are eminently calculated to sustain vitality. The medicine may therefore be exhibited in view of its expectorant powers, in either the asthenic (high) or asthenic (low) diathesis, (state of action,) without any of the apprehensions often betrayed by the friends of Allopathy, in the use of stimulating remedies in fevers or inflammation. When in possession of lobelia therefore, the

physician, in contemplating the use of expectorants, in cases of inflammation of the lungs, pleurisy, asthma, &c., need not defer the administration until the inflammatory symptoms may have subsided, but he may proceed at once, and thus fulfil both indications.

Lobelia may be safely used in all cases in which expectorants are called for.

When the medicine is used as an expectorant it is best to prepare it in the form of a tincture, and for this purpose, vinegar is perhaps the best menstruum. The dose is from 10 to 30 drops; of the powder the dose is from one to ten grains.

ARUM TRIPHYLLUM.



Indian Turnip, Wild Turnip, Wake Robin, &c.

ARUM TRIPHYLLUM.

Indian Turnip, Wild Turnip, Wake Robin, &c.

Sexual System—Class 21; order 7.

Description.—Root perennial, bulbous, fibrous below. Early in the spring it puts forth a large, ovate, acuminate, variously colored spathe, convoluted at the bottom, flattened and bent over at the top like a hood, and supported by an erect, round, green or purpleish scape. Within the spathe is the fructification, which, when mature, presents a bunch of beautiful scarlet berries, which remain after the other parts of the plant are decayed. The leaves consist of one or two triples, ovate, lanceolate, entire, standing on long sheathing footstalks.

Locality and habits.—This plant is a native of America, and is found throughout the U. States, growing in damp woods, in meadows, and along fences.

Medical properties and uses.—The wild turnip, in its recently dried state, is actively expectorant, and very applicable in coughs, and all other cases in which an expectorant is indicated.

It is best given in honey or molasses, or something of the kind, as it is necessary to give it in substance, for it will not yield its active properties to alcohol, ether, water or oil. In its recent state, it is too acrid for internal use, but has, in this state been found serviceable in whitloes, and other painful swellings, in the form of a poultice.

The root, if entire, may be preserved in its green state for a year or more if buried in the sand, or kept in a cellar.

ICTODES FOETIDA.

*Savoy Cabbage, Stink Cabbage, &c.*

Sexual System—Class 4, order 1.

Description.—Root large, bulbous, and very thickly beset on all sides with long, large fleshy fibres. The top of this plant consists of large radical leaves, somewhat similar to the com-

mon cabbage leaf, but of a deeper green color. Its appearance, when it emerges from the ground, is represented in the cut. The flowers are within the spathe which they resemble in color. The seed, which is found at the base of the style, consists of brown berries of the size of a pea.

Locality and habits.—This singular herb grows in every part of the United States, in wet lands, swamps and meadows.

Medical properties and uses.—The skunk cabbage is a good expectorant, and is likewise anti-spasmodic and nervine. In catarrh, consumption, pleurisies, and especially in asthma, it will prove itself a very good remedy. The medicine should be used in substance. The dose of the powder is from a half to a whole teaspoonful two to three times a day, as an expectorant, and oftener as an anti-spasmodic. Age impairs its virtues.

POLYGALA SENEGA.

Seneka Snakeroot.

Sexual System.—Class 16; order 8.

Description.—The root is perennial and branching, giving rise to several erect, simple, smooth, round, leafy stems, from nine inches to a foot in height. The stems are red, or purpleish below, and green above. The leaves are alternate or scattered, lanceolate, smooth, and sessile, or arranged on the stem upon short footstalks. The flowers are white, small and disposed in a close spike at the summit of the stem. This valuable herb grows in all parts of our country, but is most abundant in the south and west.

Medical properties and uses.—The senega root is a stimulating expectorant, and is also diuretic, and emenagogue. Its expectorant powers are especially valuable in catarrh, croup, and asthma. Its pungent effect on the tongue is very lasting, causing a free discharge of saliva. The medicine is used

in powder and decoction. The dose of the former is from 10 to 20 grains. A table spoonful of the coarse powder, scalded in a pint of water, and sweetened, is of proper strength; this is to be taken in table spoonful doses, often repeated.

There are several other articles that are highly esteemed as expectorants by some physicians, and perhaps merit a notice under this head.

LIQUORICE, (*Glycyrrhiza Glabra*.)—The root, or extract of this article, is a good expectorant, and is much used. The dose is from 20 to 30 grains, of either the powder or extract.

HOARHOUND, (*Marubium Vulgare*.)—This is a popular remedy in coughs, in domestic practice. The tops are generally combined with other articles of this kind, such as the spike-nard, elecampane, skunk cabbage, wild turnip, &c.; and formed into a syrup.

SPIKENARD, (*Aralia Racemosa*.)—The root, and berries, of this popular plant are very good in pectorial complaints; they relieve pain in the breast, and are healing to the lungs. This article is most commonly used in syrups with other articles.

PLEURISY ROOT, (*Asclepias Tuberosa*.)—This article also seems to hold its rank among the expectorant remedies—it is very good in pleurisies, and hence its vulgar name. The usual form of its use is in decoction, or syrup.

ELECAMPANE, (*Inula Helenium*.)—This is a balsamic expectorant and is healing to the lungs. It is best suited to follow the use of the more active expectorants. It should not be used in doses too large, as it is somewhat active in its effects. The dose of the powder is from 20 to 30 grains. In decoction of an ounce of coarse powder to a pint of boiling water, the dose is from one to two fluid ounces.

WILD CHERRY, (*Prunus Virginiana*.)—The bark of this stately tree is an excellent remedy in coughs and consumption. It is anodyne and calms irritation, thus relieving that distressing hacking that often attends affections of the lungs. If there is any single article that will cure the consumption, it is this.—The writer has known confirmed lung difficulties removed simply by chewing the bark and swallowing the juice—it is a valuable remedy in syrups for pulmonary affection.

ONION, (*Allium Copa*.)—Onion juice, is a popular remedy in domestic practice. It is used in croup, asthma, whooping

cough, and all other lung affections. The *allium sativum*, or garlick is of like properties and is used in the same way.

CHAPTER III.

Medicines affecting most prominently the follicular or glandular, and excretory organs.

I. ERRHINES.

These are a class of medicines designed for topical application, and are used as a snuff which, when applied to the schneiderian membrane, promotes its secretions. On persons not accustomed to their use they excite sneezing. Many articles, under this definition, might be brought under this head, but the practical application of these remedies is confined but to a limited number. The object of their use embraces the cure of a few diseases of the head only. In cases of head-ache, tooth-ache, ear-ache, pain in the eyes, and rheumatic affections about the head, the use of errhines is sometimes advantageous. The mode of their operation is simple and very easily understood; the irritation that they produce on the schneiderian membrane, causes an afflux to this organ, thus relieving in other parts the crowded or obstructed condition which is the cause of the pain experienced in them.

Special Errhines.

ARSARUM EUROPEUM.

Asarabacca.

Sexual System—Class 12; order 1.

Description.—Root or rhizoma, perennial. Stem short,

round, simple, herbaceous and pubescent. The leaves are opposite and stand on long footstalks; are kidney-shaped, entire, pubescent, and of a deep green color. The flower is large, of a dusky purple color, standing on a short terminal peduncle.

Locality and habits.—The asarabacca is a native of Europe, growing between 37 and 60 degrees North latitude, in woods and shady places, and flowers in May.

Medical properties and uses.—This is a popular errhine, and produces a copious flow of mucus, which continues sometimes for several days. The root is rather severe, and hence the leaves, which are milder, are generally preferred. They are used in fine powder, in the form of a snuff, two or three times a day until relief is obtained. This snuff is good in a crowded state of the head attending catarrhs &c.

NARCOTINA TABACUM.

Tobacco.

Sexual System—Class 5; order 1.

Description.—Root, annual, white, woody, and branched.—The stem is upright, tapering, woody, with a large pith, and grows from four to six feet high, with a branched top. The leaves, which are very large below, but smaller higher up the stem, are alternate, sessile, smooth, entire, lanceolate and of a yellowish green color. The flowers, which are situated on terminal panicles, are of a pale pink and white color. The corolla is bell shaped, having a border divided into five pointed segments.

Locality and habits.—The Tobacco is a native of America, but is now cultivated in every part of the world. It is a staple article of Virginia, Kentucky, and Ohio.

Medical properties and uses.—This is a powerful errhine, but the patient is very apt to become accustomed to its use. As

a snuff, this nauseous article has quite a large number of votaries, many of whom have become so habituated to its enslaving influence, that they reckon it among the luxuries of life. Nor is its use as a snuff, the only result of its intoxicating power. Independent *man*, so fond of slavery, against his natural taste, learns to chew it. Nor do the more delicate of his species, the *women*, disdain the loathful habit—they smoke!—they snuff!!—and per chance they chew tobacco!!!—What strange infatuation! what apology is there for the habit? is the practice graceful? is it convenient? *nay* is it conducive to health? Answer thou tobacco slave who hast but two humble zoonic brethren in its use.

Tobacco is narcotic and sedative, its use is therefore injurious. It has however been much appreciated by many, for its relaxant powers. Its use as a relaxant, among Reformers, however, is entirely superceded by lobelia. As an errhine, a small pinch of the powdered leaves may be taken three to four times a day, or oftener if necessary, until relief be obtained.

BAYBERRY, (*Myrica Ccrifera*.)—This is a very good errhine, and may be used in combination with the powdered herb of lobelia.

LOBELIA INFLATA.—The powdered herb is good in catarrhal headache, and inflammation of the schneiderian membrane.

WILD GINGER, (*Asarum Canadensis*.)—The pulverized leaves are a very good errhine.

II. SIALAGOGUES.

These are medicines which act prominently on the salivary glands, producing a free secretion and discharge of saliva.—They are useful in fevers, and inflammations of the mouth, tongue, fauces, and throat, and afford great relief when the mouth is inclined to be dry and parched.

Special Sialagogues.

PRICKLEY ASH, (*Xanthoxylum Fraxineum*.)—The bark of the root of this article is an excellent sialagogue, producing copious discharges of saliva, which continues for many hours. It

may be used in decoction, or the root may simply be chewed and retained in the mouth for a few moments, or if chewing it is not convenient, the powder may be moistened and held in the mouth for a time.

CAYENNE PEPPER.—The tea or tincture of this valuable medicine is a very good sialagogue.

LOBELIA INFLATA.—All the preparations of this article are good sialagogues, and as such, may be used indiscriminately.

III. DIURETICS.

DIURETICS are medicines which are calculated to promote the urinary evacuations. Their use, in many cases, is of considerable importance, especially in urinary suppressions, gravel, dropsies, fevers, and visceral inflammations.

Special Diuretics.

EUPATORIUM PURPUREUM.

Queen of the Meadow, Gravel Root.

Sexual System—Class 17; order 1.

Description.—Root perennial, horizontal, woody, with many long black fibres. Stem upright, smooth, purpleish green, hollow, and from three to five feet high. The leaves, which are situated on the stem in whorls of from three to six at a joint, are lanceolate, serrate, and about four to eight inches in length, and from one to two in width. The flowers are purple, small, and numerous, and are situated in beautiful umbels on the top of the stem and branches.

Locality and habits.—This useful plant grows in meadows, in other low grounds, and in woods that are not too much shaded. It flowers in July and August.

Medical properties and uses.—This species of the eupatorium is one of the most valuable diuretics known, operating with ease and promptness. It is singular that an article so valuable as this, should not be more spoken of in works on materia medica. In the majority of cases this article will give immediate relief in backache: and in dropsies, urinury suppressions, and gravel, it is perhaps inferior to no other simple article. It is generally used in decoction; an ounce of the coarsely powdered root scalded in a pint of boiling water, and drank in the course of two or three hours, is a proper portion.

JUNIPERUS COMMUNIS.

Juniper.

Sexual System—Class 22; order 1.

Description.—The Juniper is a bushy shrub, attaining sometimes to the height of twelve to fifteen feet; with many branches. The leaves are evergreen, narrow, entire, sharply pointed, channeled, of a deep green color, and are attached to the stem or branches in threes. The flowers are axillary, sessile, small; the males discharging a copious amount of yellow pollen; females green, and on scaly stalks. This tree is a native of Europe, but has been introduced into this country.

Medical properties and uses.—The berries and oil are actively diuretic. It is the oil of Juniper that gives to gin its diuretic property. An ounce of the bruised berries may be scalded in a pint of boiling water, and drank in the course of a day, or the oil may be taken in doses of from one to three dozen drops. The Juniper may be used in all cases in which a diuretic is indicated.

APOCYNUM CANABINUM.

Indian Hemp.

Sexual System—Class 5; order 2.

Description.—The Indian hemp bears a very close resemblance to the bitter root (*Apocynum Androsæmifolium*.) The root, which is the part used for medical purposes, is about the thickness of a quill, and several feet in length. The stems are herbaceous, erect, branching, of a brown color, and from two to three feet high. The leaves, which are opposite, are oblong, ovate, pubescent, and acute at both ends. The flowers are small and numerous, and are disposed in panicles like those of the bitter root; they are of a greenish yellow color without, and of a pink or purple within.

Locality and habits.—This article grows in meadows and other bottom lands, along fences, and the skirts of woods, found in most parts of the United States.

Medical properties and uses.—The Indian hemp is a very good diuretic; it is also diaphoretic, emetic, and cathartic. Some Botanical physicians make much use of it in view of its diuretic properties. It is generally used in decoction; a half an ounce of the root scalded in a pint of water, will be of suitable strength. This is to be drank through the course of a day.

COPAIBA OFFICINALIS.

Copavia.

Sexual System—Class 10; order 1.

Description.—There are a number of species of the copai-

fera, that yield the balsam, but the *C. officinalis*, described in the U. S. Dispensatory, is considerable of a tree, growing in Venezuela, and the West Indies. The tree is of lofty growth, much branched, and has a heavy foliage. The balsam is obtained by making deep incisions into the stems, from which the pure balsam flows. It is thin and colorless when fresh, but acquires a thicker consistence, and yellow tinge, by age.

Medical properties and uses.—The balsam is diuretic, and gently stimulant, and laxative. As a diuretic, it is much in use in the treatment of urinary affections, and in gonorrhœa. But it is somewhat irritating in its effects on the urinary organs, especially if the use of the medicine is long continued. The copavia is also considered valuable by some in affections of the lungs and trachea, and by others in dysentery, leucorrhœa, and for worms. The dose is from 20 drops to a teaspoonful three times a day.

TEREBINTHINA VULGARIS.

Pine.

Sexual System—Class 21; order 8.

Description.—There are various species of the pine that yield the turpentine of commerce. We have 1, the *Pinus Palustris*, 2, the *P. Tæda*, 3, the *P. Sylvestris*, &c. The Pines generally, are tall forest trees, growing on poor lands in the eastern and southern states. The leaves are ever-green, very narrow and long, and are generally in twains or threes, thickly set on the small twigs. The flowers or catkins, are a singular conical arrangement, which hang on the ends of the twigs.

The oil and spirits are distilled from the turpentine, or resinous juice that is exuded from the tree. The pure oil of turpentine is perfectly limpid and colorless, of quite a strong penetrating odor, and pungent taste.

Medical properties and uses.—The oil of turpentine is stimulant, diuretic, diaphoretic, rubefacient, and anthelmintic. As a diuretic, it is very active, and thorough, but is rather harsh. When long continued it is apt to irritate the urinary passages, and not unfrequently gives rise to violent stranguary. The

dose as a diuretic, is from 10 to 30 drops, repeated every few hours.

LEONTODON TARAXACUM.

Dandelion, Pissabed.

Sexual System—Class 17; order 1

Description.—The dandelion is an herbaceous plant, having a perennial fusiform, fibrous root, and many deeply toothed radical leaves. The flower which is yellow, stands on a long hollow stem, and puts forth early in the spring; the whole plant, when wounded emits a milky juice. It grows in meadows and pastures, all over the U. States.

Medical properties and uses.—The root of this plant is a valuable diuretic, it is also tonic, pectoral, and alterative. This article is much used by the German physicians, and is undoubtedly one of our most valuable indigenous plants. But, like many other useful articles, it is neglected on account of its commonness. The medicine is considered serviceable in affections of the kidneys, spleen, liver and lungs; and has been found of benefit in many other glandular diseases. The dose is five to six grains of the extract, or a wine glassfull of the strong decoction three or four times a day.

GALIUM ASPERULA.



Small Clevers, Goose grass, &c.

Sexual System—Class 4; order 1.

Description.—This is a delicate herbaceous vine that grows many feet in length; and being extremely much branched, forms mats of various sizes, which are supported by bushes, fences, or any thing that may chance to be in its reach. The leaves are small, numerous, lanceolate, linear, and are situated in whorls around the vine. They are beset with prickles, or teeth that project backwards. The flowers are white, very small, and numerous.

Locality and habits.—Clevers is an indigenous plant, growing in meadows, along brooks, in new grounds, and in open moist woodlands.

Medical properties and uses.—This is a very good diuretic, operating with considerable promptness and certainty. It may be used in all cases in which diuretics are indicated.

There is another variety of clevers, called galium aperine, which is of larger growth, and is hence usually called large clevers, that is also a good diuretic.

When used, the leaves and vines are generally prepared by infusing them in warm water, which may then be drank freely.

ASCLEPIAS FIBROSA.

Silkweed, Fibrous Cottonweed, Indian Hemp, &c.

Sexual System—Class 18; order 5.

Description.—The root is perennial, fibrous, white, and smooth. The stem is smooth, shining, branched on the top, and from two to three feet in height. It has a very strong flaxy bark, whence it is sometimes called Indian hemp. The leaves are lanceolate, acute at both ends, smooth, entire, about an inch in width, and about three inches in length. At the top of the stem, they are usually joined at the base so as to form compound leaves of a triangular shape. The flowers, which in their organization resemble those of the asclepias generally, are found in bunches on the branches and top of the stem. They are of a dusky yellow color, and appear in July.

Locality and habits.—This species of the asclepias seems to delight in sandy bottoms, and banks of streams. It flourishes in most parts of the U. States.

Medical properties and uses.—This article is quite a good diuretic, and may be used with confidence in all cases in which medicines of this class are found useful. Considerable ad-

vantage may sometimes be gained by its use in fevers, and inflammation of the lungs and liver; and especially in cases of inflammation of the kidneys, bladder, and in gravel. It is chiefly used by infusion. A large table spoonful of the powdered root may be scalded in a pint of water, and drank in the course of three or four hours.

PARSLEY, (*Apium Petroselinum*.)—The root of the common garden parsley, is a very good diuretic, useful in dropsies, gravel, affections of the kidneys, &c. It is prepared in strong infusion, and drank freely.

ASPARAGUS, (*Asparagus Officinalis*.)—The root of this well known garden vegetable, prepared by scalding two ounces in the green state, in a pint of boiling water, and drank freely, is also a pretty good diuretic.

ELDER, (*Sambucas Canadensis*.)—The inner bark of the common sweet elder is diuretic, and cathartic, and as such, is valuable in dropsies, and kidney affections.

WATERMELON, (*Cucurbita Citrullus*.)—The seeds of this delicious production, as well as those of the pumpkin, cucumber, muskmelon, and gourd, are diuretic; and are much used in domestic practice, for stranguary, inflammations of the urinary bladder, kidneys, &c. They are used in decoction, which should be drank freely,

MILKWEED, (*Asclepias Syrica*.)—This article is also somewhat diuretic in its effects, and has been highly recommended in dropsey. It is used in strong infusion and taken freely.

CORN SNAKEROOT, (*Eryngium Aquaticum*.)—This is a perennial plant, growing some two feet in height, with branches. Its leaves are long, resembling young corn leaves, and are thickly beset along their edges, with spines or prickles. The flowers are disposed in globase heads. The root which is tuberous in form, has an aromatic, bitter, pungent taste. It is diuretic, stimulant and expectorant, and is useful in dropsies, gravel, and kidney affections. It is also highly recommended, both as an external and internal remedy, in snake bites.

FLEABANE, (*Evigeron*.)—There are several species of this plant that are possessed of nearly the same medicinal properties. They have been variously called, cocash, skevish, skabish, frost-weed, squaw-weed, field-weed, &c. They have a yellowish perennial root, and a round hairy stem, growing from three to four feet high. The leaves are long, lanceolate, and edged with hairs; the lower ones are toothed. The flowers are very small, white, numerous, and are arranged in terminal peduncles.

These plants possess valuable diuretic, tonic, and some-

what astringent properties, particularly valuable in dropsies, kidney affections, chronic diarrhœa, suppression of urine, &c. The dose of the powdered root is from thirty to forty grains.

IV. ANTILITHICS.

Under this head it is designed to notice such articles as are known to have the power to alter the state of the urinary secretion, so as to prevent the formation of calculi, or to dissolve them when already formed. Their operation is entirely chemical. In their effects they disturb the chemical relation of the several elementary principles of which these distressing obstructions are constituted.

Special Antilithics.

CARBONAS SODÆ ET POTASSÆ.

Soda and Saleratus.

As the various urinary calculi are generally composed of oxygen united with a base, either in the form of lithic acid, oxalate of lime, and cystic oxide, or of the earthy phosphates, it is easy to discover the utility of such alkalines as soda and potash, in these difficulties. It is therefore unnecessary to refer to the amount of evidence that might here be adduced in their favor. But it should be borne in mind, that the potency of these agents is only evinced in preventing, or obviating the lithic or calculine diathesis, or in other words, in preventing the formation of calculi, while the elements are free, for it is known that when these formations exist, and the elements thereby rendered comparatively latent, that little can reasonably be expected from these remedies. The dose of these medicines, is from a half to one tea spoonful, dissolved in a half tea cup full of water, to be taken once or twice per day.

GRAVEL ROOT, (*Eupatorium Purpureum*.)—This article is now gaining considerable reputation as a lithontriptic, and has, in the hands of the writer, given more general satisfaction than any other article used by him for gravel. The most distressing symptoms have been known to yield to its use. The use of the medicine should be commenced in small doses, and increased to as much as the stomach will bear.

RADISH, (*Raphanus Sativus*.)—The juice of the garden radish, is highly recommended as an agent to dissolve urinary calculi,—it is recommended that it should be injected into the bladder, as well as used per stomach. The dose is as much as the stomach will readily bear.

HONEY, (*Mel*.)—This article is regarded by some as being very good to relieve the symptoms of gravel, and with this view, it may be used to sweeten other articles, less pleasant to take. Some affirm that honey will actually dissolve the stone in the bladder.

CARBONATE OF MAGNESIA, (*Magnesia Carbonas*.)—This article is a very good antilithic; it is perhaps more prompt in preventing an excess of uric acid, than any of the alkalies. It certainly merits confidence, and should be used in all cases when the deposition is of the lithic kind. But in calcereous formations, this article, as well as the active alkalies, is perhaps of no use, nay, it is perhaps pernicious in its effects. In all cases in which the deposition consists of a yellowish brown pink or lateritious color, the alkalies are indicated. The white precipitates generally consist of earthy phosphates, or calcareous formations, in which the acids are perhaps most indicated.

LIME WATER, (*Aqua Calcis*.)—This is also a good antilithic, and may be used freely as such, when articles of this kind are indicated.

UVÆ URSI FOLIA, (*Bearberry*.)—This article has had its share of favor as a remedy in gravelly affections. De Haen, Farriar, and others, recommend it very much. The dose of this article is from 10 grains to a teaspoonful of the powdered leaves, three times a day.

V. DIAPHORETICS.

Diaphoretics are medicines which, in their action on the animal economy, increase the natural transpiration by the

cuticular exhalents, or in other words, which promote perspiration.

By former usages this term expresses insensible perspiration only, and when sweating was spoken of, the term sudorific was used. The convenience of the latter term in expressing degrees of the perspiring phenomenon, is such as still insures it a place in the medical vocabulary. Nevertheless, it is designed to notice under the above head, indiscriminately, such articles as are found most valuable in promoting general perspiration. As obstructed perspiration is characterized by various conditions of the body, it is obvious that a variety of articles may contribute in forming a proper list of these agents. In some instances, the obstruction may arise from a spasmodic constriction of the emunctuaries, while in others it may be dependant on languor of the circulation, or general debility. It is plain that in the former case, the relaxing diaphoretics are indicated, and that in the latter, those of a stimulating character are best.

The diaphoretics are among the most valuable medicines that we possess, their usefulness being entirely equal to the importance of perspiration. Their application in fevers, and many other acute diseases, is almost indispensable, while in many chronic affections they are also, often of great utility.

Although stimulants generally produce perspiration, yet the notion that no article or means but those that are very pungent to the taste, and which in their effects, manifestly increase, in a corresponding degree, the action of the heart and arteries, can produce diaphoresis, is not only unreasonable and absurd, but its erroneousness is witnessed almost every day by all observers. A copious draught of any fluid will usually promote perspiration. Sometimes a simple drink of cold water will produce a copious sweat. Some of the mineral poisons, which manifestly *diminish* the action of the heart and arteries, are nevertheless, at the same time, diaphoretic; and as such, antimony and nitras potassa, might here be named.

Special Diaphoretics.

Lobelia, cayenne pepper, ginger, camphor, cloves, cinnamon, peppermint, and many other articles, whose most prominent properties give them a conspicuous place elsewhere, are among our best diaphoretics. Several of these form some of the chief ingredients of many of the most popular diaphoretic compounds, used by the Reformed practitioners. But, as the limits of this work will not admit of a separate notice of

these articles in this place, it is thought proper to pass over them here, to consider those articles whose most prominent properties, bring their consideration properly under this head.

XANTHOXYLUM FRAXINEUM.

Prickly Ash.

Sexual System—Class 20; order 5.

Description.—The prickly ash is an indigenous shrub, from five to ten feet in height, and considerably branched. The branches are beset with many strong, sharp, scattered prickles. The leaves are pinate, with four or five pairs of leaflets, and one terminal one. The flowers are small, of a greenish color, and situated in bunches about the base of the young shoots. They are followed with greenish red berries, which burst in the fall, and present a round black oval seed. The prickly ash grows all over this country, on rich bottom land, on the banks of streams, and on hillsides.

Medical properties and uses.—The bark of the root of the prickly ash is actively diaphoretic, and very permanent in its effects. The berries, which are more pleasant to the taste, are equally good. The root and berries when chewed, impart a very pungent and acrid taste, which is quite lasting.—Either, when chewed and held in the mouth, have been known to cure the toothache. The medicine has gained quite a character, in its effects in rheumatism. It is likewise very good in catarrhs, pleurisies, and visceral inflammations. As a diaphoretic, in fevers, and in many chronic affections, it holds a high rank. The medicine is generally taken in infusion; an ounce of the powdered root, or half as much of the berries, is scalded in a pint of water, and taken in wineglassful doses once in an hour or two.

EUPATORIUM PERFOLIATUM.

Thoroughwort, Boneset, Thoroughstem, &c.

Sexual System—Class 19; order 1,—æqualis.

Description.—The root of the thoroughwort is perennial, horizontal, crooked, with fibres. The stems, which are from one to a dozen in number, are erect, round, hairy, branched at the top, and from two to three feet high. The leaves are very peculiarly shaped; they may be considered opposite, with their broad bases joined around the stem, or the two may be considered as one leaf, perforated by the stem. They extend from three to four inches from the stem, and taper regularly from this into an acute point. Like the stem, they are thickly beset with fine white hairs, which give them, though of a deep green, a paler appearance. The Flowers are small, numerous, whitish, and are arranged in clusters or corymbs on the top of the stems and branches.

Locality and habits.—Nearly all the varieties of the numerous genus to which this article belongs, delight in wettish rich soil, growing very plentifully in meadows, pasture grounds, along streams, and in open woodlands. The thoroughwort may be found, in favorable places, throughout the U. States.

Medical properties and uses.—This article constitutes one of our surest, and most permanent diaphoretics. In its action, in producing diaphoresis, it is very analogous to the lobelia inflata, producing nausea and general relaxation; and is hence of incalculable utility in the treatment of fevers, especially those occurring in the Western States. It is also actively tonic, and is therefore peculiarly applicable in intermittent, and bilious remittent fevers. The Indians of our country have used the thoroughwort in these, and many other varieties of disease, from time immemorial. They prepared it in decoction, and drank it freely before going into their baths.

For colds, and inflammatory affections of the organs of the chest, this forms an excellent remedy.

The thoroughwort infusion forms an invaluable relaxant enema, useful in all fevers and inflammations.

In large doses the medicine proves emetic and cathartic.

The most common preparation of this article is the infusion; this is made by scalding an ounce of the leaves and flowers in a pint of water. The dose is a wineglassful once in an hour, unless it should sicken, when the dose is to be smaller. It is also prepared in pills with cayenne pepper, which are taken as a diaphoretic and anti-dyspeptic, in doses of from two to four. The dose of the extract is from five to ten grains.

POLEMONIUM REPTANS.



Greek Valerian, Sweat Root, Bluebells.

Sexual System—Class 5; order 1.

Description.—Root perennial, small, very fibrous, and white. Leaves pinate like the locust, and situated on radical petioles

or footstalks, about 8 inches or a foot in height. The flowers, which are small and of a beautiful blue color, are campanulate or bell-shaped, and disposed on separate, branched stems.

Locality and habits.—This is a very common indigenous plant, growing in meadows, low wood lands, along fences and road sides. It flowers early in the spring.

Medical properties and uses.—The Greek Valerian is an active diaphoretic, producing copious and free perspiration. The medicine is applicable in all cases in which diaphoretics are indicated. It is one of the prominent ingredients in the sudorific powders.

Besides its diaphoretic properties, it possesses others that are much esteemed in consumption and other pectoral diseases. The dose of the powdered root, is a teaspoonful. The most common form in which it is used, is by infusion; a table spoonful of the root in coarse powder, is scalded in a pint of water, and drank freely.

ASCLEPIAS TUBEROSA.

Pleurisy Root, White Root, Swallow Wort, &c.

Sexual System—Class 5; order 2.

Description.—This species of asclepias has a large, tuberous, perennial root, which is branched, rough, and generally crooked. Within it is white, but externally it is of a dirty yellow color. In the latter part of May it puts forth from one to a dozen or more stalks, which arrive at full growth in July. These are round, pubescent, or woolly, erect, or inclining, branched at the top, and about the thickness of a little finger.—The leaves are oblong, lanceolate, thick or fleshy, entire, pubescent, pale underneath, green on the upper side, and stand alternately on the stem, and are scattered on the branches. The flowers, which are of a very beautiful orange yellow, are disposed in bunches or umbels on the tops of the stem and

branches. The flowers are followed with oblong, pointed pods, which contain the seed and seed down.

Locality and habits.—This beautiful and valuable plant flourishes most on sandy and gravelly plains, in neglected fields, along fences, in orchards, and in pasture grounds. It blossoms in July.

Medical properties and uses.—The *asclepias tuberosa* is a mild but pretty certain diaphoretic, particularly useful in pleurisies, inflammation of the lungs, and other pectoral inflammatory diseases. It is an excellent article in hectic fevers attending consumption, and is also a good remedy in those coughs attended with a feverish condition of the body, that arise from colds. It promotes expectoration, equalizes the circulation, and sustains a moisture of the skin.

This article constitutes a valuable ingredient in diaphoretic compounds. The infusion is the most common form in which it is used. It is, however, quite probable that the extract will before long be the most common preparation of this article. The infusion is prepared by scalding an ounce of the powdered root in a pint of water; this is to be drank freely, while other means are being used to promote perspiration.

This article forms a valuable ingredient in syrups, prepared for coughs and other pectoral diseases.

SANICULA MARILANDICA.

Indian Sanicle, Black Snake Root.

Sexual System—Class 5; order 2.

Description.—Root perennial, fibrous, the older fibres black externally, the younger ones of a dirty white, or brown. The flower stem is erect, round, branched, and from six to sixteen inches in height. The leaves are digitate, lanceolate, smooth, entire, serrate, and generally five at a whorl. The flowers are small, white, and disposed in clusters on the tops of the branches.

SANICULA MARILANDICA.



Indian Sanicle, Black Snake Root.

Locality and habits.—The sanicle abounds in low, moist and rich woodlands, in pasture grounds, along fences, and in new grounds. It is found in most parts of the United States.

Medical properties and uses.—This is a good diaphoretic,—useful in malignant and protracted fevers. It sustains a gentle and permanent moisture of the surface. The medicine

also quiets nervous irritability, expels flatus, and forms an excellent external application to snake bites, and other poisoned, and angry wounds. The dose, as an internal remedy, is a tea spoonful of the powder. It is, however, more generally used in strong decoction.

NEPETA CATARIA.



Catnip.

NEPETA CATARIA.

Catnip.

Sexual System—Class 13; order 1.

Description.—This is a perennial, herbaceous plant, with a hoary, quadrangular, and branching stem, which grows frequently to the height of three feet. The leaves are opposite, cordate, dentate, and pubescent; they are green above, but whitish on their under surface. The flowers, which are slightly purple, are arranged in terminal racemes, and appear in July and August.

Locality and habits.—This plant is found in abundance throughout the United States, growing in gardens, waste fields, along highways, and around old buildings.

Medical properties and uses.—The leaves of this plant form one of our most valuable diaphoretics, producing perspiration without augmenting the heat of the body, rendering it peculiarly adapted to the cure of febrile affections.

This plant is also valuable as a *carminative*, and is highly recommended in female obstructions, hysterics, headache, worms, and spasms. It is useful in fomentations, and as an ingredient in poultices for swellings. An infusion of it, forms an excellent injection for children in colic, and restlessness.

For internal use, it is employed in infusion; a handful should be infused in a pint of boiling water, and taken freely.

LOBELIA CARDINALIS.



Red Lobelia, Cardinal Plant, &c.

Sexual System—Class 5; order 1.

Description.—Root perennial, fibrous, white, and smooth.—Stem erect, simple, round, pubescent, from two to four feet in height, and terminating in a spike of beautiful red cardinal

flowers, which in their organization very closely resemble those of the lobelia inflata. The leaves are long, alternate, lanceolate, entire, acute at both ends, and serrate.

Locality and habits.—The red lobelia seems to delight in low wettish lands, and the banks of streams. It is found in most parts of this country. Its flowering time is in July and August.

Medical properties and uses.—Red lobelia is a pretty good diaphoretic, particularly useful in fevers, pleurisies, and visceral inflammations. It may be combined with thoroughwort, and taken freely by infusion. It is also highly recommended in worm complaints, and as a nervine.

ANTHEMIS COTULA.



Mayweed, Dog Fennel, Wild Chamomile, &c.

ANTHEMIS COTULA.

Mayweed, Dog Fennel, Wild Chamomile, &c.

Sexual System—Class 17; order 2.

Description.—Root annual, crooked, and fibrous; stem erect, striated, and branched, from one to two feet high, and bearing alternate, sessile, flat, doubly pinnated, slightly hairy leaves, with pointed linear leaflets. The flowers, which stand alone upon the summits of the branches, and stems, consist of a central, convex, yellow disk, with white radial florets, which stand out horizontally during the day, but incline their disk toward the stem at night.

Locality and habits.—This plant is indigenous to this country, and is found in abundance all over the United States, growing by road sides, and in old fields.

Medical properties and uses.—The Mayweed has been too much neglected by physicians, on account of its commonness. It is a valuable, sudorific, stimulant, anodyne, emetic, &c., and is, consequently, useful in colds, asthma, dropsy, fevers, rheumatism, hysterics, epilepsy, &c. It forms one of the most valuable fomentations in the treatment of swellings, contusions, piles, hysteric fits, suffocations, &c. The fresh plant, bruised, or put into boiling water, or vinegar, and laid on the skin, will produce a permanent rubefacient effect. For internal use, it is commonly taken in infusion, prepared by steeping half an ounce of the powdered leaves, in a pint of boiling water. This should be used freely. Drinking of the tea will greatly assist the operation of emetics.

HEDEOMA PULEGIOIDES.

Pennyroyal.

Sexual System—Class 2; order 1.

Description.—This indigenous annual plant grows to the height of from 8 inches, to more than one foot. The root is small, branched, fibrous and of a yellowish color. The stem is pubescent, and has numerous slender erect branches. The leaves are opposite, numerous, and nearly acute. The flowers are of a pale blue color, and are situated along the whole length of the branches. It has an agreeable aromatic smell, and a warm pungent taste.

Locality and habits.—This plant is abundant throughout the United States, and is found in dry soils, in pastures, and by road sides.

Medical properties and uses.—This article is much used in domestic practice, where it is highly esteemed as a means of promoting perspiration. It removes female obstructions, relieves colds, &c. As a stimulant, its effects are diffusible, producing an agreeable sensation of warmth, and a healthy glow throughout the whole system. It is also valuable to facilitate the operation of emetics, and other medicines.

It may be used in infusion, tincture, or essence. The infusion, however, is preferable.

CHAPTER IV.*Medicines affecting most prominently the nervous system.*

I. NERVINE TONICS, AND ANNODYNES.

These are a class of medical agents that have a specific effect on the nervous system, and chiefly evince their powers in

quieting nervous irritation, relieving pain, and in stimulating the nervous tissues to a healthy action. These agents are not necessarily narcotics, or soporifics, although the most permanent and potent annodynes are such: or, it seems at least, that the annodyne properties are generally associated, in medicinal plants, with the narcotic and soporific. Nevertheless, it is certain that there are articles of medicine which are considerably prompt in quieting nervous irritation, and relieving pain, that do not produce any stupefying or soporific effects.

Medicines of this class are particularly indicated in cases of nervous weakness, chorea, tetanus, epilepsy, delirium tremens, neuralgia, subsultus tendinum, &c.

Special Nervine tonics and Annodynes.

CYPRIPEDIUM PUBESCENS.



Yellow Lady's Slipper, American valerian.

Sexual System—Class 18; order 2.

Description.—There are several varieties of the lady's slip-

per that are nearly of like value as nervines. Besides the pubescens,* we have the candidum, parviflorum, spectabile, and the acaule, all of which are used for the same purposes. The yellow lady's slipper is, however, generally considered rather the best medicine.

In their appearance, the several varieties bear considerable resemblance, excepting that they vary somewhat in size, the number of their leaves, and the color of their blossoms. The candidum, has white blossoms, the spectabile red, and sometimes grayish, while, as already stated, that of the pubescens is yellow. The acaule is of smaller growth than the rest.

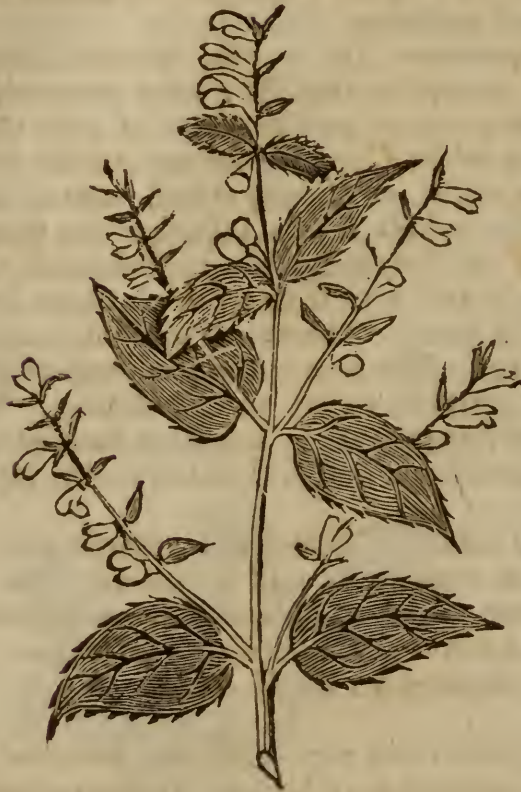
The root of the lady's slippers is perennial, of a dirty yellow or brown color, with long crooked fibres, resembling the ravelings of knitting. The stem is upright, round, and sheathed by the leaves. The leaves are from two to six in number, lance-oblong, striated, entire, and sheathing. The flower is of a very singular formation, having a fancied or real resemblance of a moccason, and is situated on the top of the stem.

Locality and habits.—These plants grow in a rich soil in moist places, in open woodlands, and meadows. The yellow variety is, however, found on uplands, as on hillsides, in woods where it is not too much shaded, and on plains. It is common in most parts throughout the U. States.

Medical properties and uses.—All the varieties of the lady's slipper above named, may be used indiscriminately, and will be found among our best nervines. In their operation a power possessed by few articles of the materia medica, is evinced. They quiet nervous irritability, relieve pain, and seem to refresh both body and mind. They are harmless in their effects, and may be used in all cases in which articles of this class are indicated. They are particularly useful in hysterical affections, hypochondriasis, delirium tremens, &c. The writer has known some of the most difficult cases of the latter kind yield with remarkable promptness to the effects of lady's slipper. The dose is a teaspoonful of the powdered root, or as much of the tincture, often repeated.

* Sometimes called *luteum*.

SCUTELLARIA LATERIFLORA.

*Blue Sculcap.*

Sexual System—Class 13; order 1.

Description.—Root perennial, fibrous, and yellowish. Stem erect, square, from one to three feet in height, much branched; branches opposite, square, and smooth. Leaves opposite, cordate, lanceolate, serrate, very thin, and supported on long petioles. Flowers labiate, with a tube half an inch in length, of a delicate blue color, and situated along on the tops of the stem and branches. The flowers are followed by seed vessels of a very singular shape; they are cuped, and open at the sides.

Locality and habits.—The sculcap is an indigenous plant, growing in pasture grounds, along fences, and in open woods.

Medical properties and uses.—Sculcap is one of our most efficient nervine tonics, and antispasmodics; it operates with promptness and certainty, and is applicable in all cases of nervous debility, and irregular nervous excitement. The writer has been very successful with this article, in connection with lobelia, in the treatment of hydrophobia. No article seems to answer a better purpose in cases of the nervous weakness common to females. It is also very applicable in the debility that follows protracted fevers; and has been highly recommended for the cure of intermittents.

This medicine, being a pure nervine tonic, may be relied upon in all cases in which articles of this class are indicated. The dose is a teaspoonful of the pulverized leaves, or as much of the tincture.

VALERIANA OFFICINALIS.

English Valerian.

Sexual System—Class 3; order 1.

Description.—The exotic valerian is a large handsome herbaceous plant, with a fibrous perennial root. The stem is erect, round, channeled, and from two to four feet in height. The leaves of the stem are sheathing; the radical ones are larger, elliptical, and deeply serrate. In the former, the leaflets are lanceolate and partially dentate. The flowers are small, white or rose colored, and situated in terminal corymbs.

Locality and habits.—This plant is a native of Europe, where it is found in damp woods and meadows, and sometimes on uplands.

Medical properties and uses.—This is an excellent nervine, particularly servicable in hysterical affections, but may be used with advantage in all cases in which the American Valerian is found servicable. The dose is a teaspoonful of the pulverized root, but it is more commonly prescribed in tincture; the dose of this, is from one to two teaspoonfuls.

LACTUCA ELONGATA.

*Wild Lettuce, Trumpet weed.*

LACTUCA ELONGATA.

Wild Lettuce, Trumpet weed.

Sexual System—Class 17; order 1.

Description.—This is an indigenous biennial plant, with a hollow stem, from three to six feet in height. The leaves are very deeply toothed, somewhat resembling the dandelion, smooth on the under side, and sessile. The flowers resemble those of the common garden lettuce, and like them, are disposed in corymbose panicles.

Locality and habits.—The wild lettuce is a very common plant, found throughout this country, growing in waste fields, open woodlands, and roadsides; but delighting most in a rich soil. It flowers in June and July.

Medical properties and uses.—The milky juice of this plant, is an excellent annodyne, and nervine, operating with safety and promptness. It is without any narcotic power. There is perhaps no better application than this for painful hæmorrhoidal tumors. It seems to quiet the irritation, and rapidly to heal them. The indications for its internal use, are tenesmus, spasms, chorea, &c. The dose is from five to fifteen grains of the inspissated juice.

PANAX QUINQUEFOLIUM.

*Ginseng.*

Sexual System—Class 5; order 2.

Description.—The ginseng has a perennial, fusiform root, of the size of a man's finger or larger. The stem is upright, round, smooth, from six inches to a foot in height, and divided into three branches on the top. The leaves are compound, consisting of five, or more rarely of three or seven petiolate, oblong, ovate, acuminate, serrate leaflets. The flowers,

which are arranged in a simple umbel, supported by a panicle rising from the fork of the stem, are small and of a greenish color. They are followed by a cluster of kidney-shaped, scarlet berries, containing two and sometimes three seeds.

Locality and habits.—This is an indigenous plant, growing in rich soil, in open woods and new grounds, throughout this country.

Medical properties and uses.—The ginseng is a good nervine tonic, gentle stimulant, demulcent and diaphoretic. It is very useful in nervous affections characterized by debility and irritability.

This plant is valued extremely high in China, where no medicine is much esteemed unless combined with this. But in this country, it is not much esteemed by the profession generally. Still, as a nervine, the medicine well merits a place in our materia medica. The usual dose is a tea spoonful of the pulverized root, but may be taken in much larger portions.

ANGELICA ARCHANGELICA.

Garden Angelica, Archangel.

Sexual System—Class 5; order 2.

Description.—Root biennial, long, thick, fleshy, and fibrous. Stem large, round, hollow, jointed, channeled, smooth, branched, of a purplish color, and some five feet or more in height. The leaves which stand on long, round, hollow footstalks, are doubly pinnate, with ovate, lanceolate, pointed, serrate leaflets, of which the terminal one is tri-lobed. The flowers, which are small, are of a greenish-white, situated in terminal umbels. The seed is round and flat, with a swelling in the middle.

Locality and habits.—This plant is a native of Lapland and Northern Europe, but is now cultivated in nearly all our gardens.

Medical properties and uses.—The seed and root of this plant are aromatic, nervine, and carminative, and are very good to cover the taste of less pleasant medicines; and in their use, therefore, we have a double advantage in all cases in which articles of this class are indicated.

ANGELICA ATROPURPUREA.

Wild Angelica.

Sexual System—Class 5; order 21.

Description.—This plant very closely resembles the foregoing, having a large perennial root, and a dark, smooth, hollow, herbaceous stem, growing from four to ten feet high.—The leaves are ternate, and supported on inflated footstalks; their leaflets are ovate, acute, serrate, and the three terminal ones joined at the base. The flowers are of a greenish white. Seeds not so large as those of the archangelica, but of nearly the same shape.

Locality and habits.—The angelica A. is found throughout the United States, in meadows, and swampy places. It flowers in July.

Medical properties and uses.—This is an aromatic nervine tonic, stimulant, and carminative. The seeds and roots are the parts used. They are a valuable remedy in diseases of children, such as colic, pains in the stomach, &c. The seed also forms a very good vehicle for the administration of other medicines, especially cathartics, disguising their taste, and modifying their griping effects. Dose, from 30 to 60 grains, in substance, or it may be used by infusion.

ANISE SEED, (*Anisum Semina*.)—This is a very good anodyne and carminative, and is useful in colic, and flatulent disorders generally. It is peculiarly serviceable as a soothing anodyne for infants, and in modifying the unpleasant effects of other medicines. The dose for an adult, is a tea spoonful of the

powder, or a table spoonful of the tincture. For a child two years old, a tea spoonful of the tincture may be given.

FENNEL SEED, (*Fœniculum Semina*.)—This is also a valuable anodyne, and carminative, and may be used in all cases where the anise would be indicated.

CAMPHOR.—Gum camphor is an excellent anodyne, operating with remarkable promptness. It is particularly useful to relieve afterpains in obstetrical practice. The medicine is generally used in tincture, of which the dose is a tea spoonful every 30 or 40 minutes, until relief is obtained.

II. ANTISPASMODICS.

This is a class of remedies that in their effects on the system, have a tendency to modify irregular nervous action, and thus to relieve spasms. The medical agents constituting this class, differ from the foregoing in their being more powerful, permanent, and relaxing in their effects. It is true, however, that many articles called nervines and anodynes, are prominently antispasmodic in their operation.

Antispasmodics, as the name indicates, are particularly useful in all cases of convulsions or spasms: such as epilepsy, apoplexy, tetanus, chorea, hydrophobia, &c. They are also very serviceable to relieve that constricted condition of the capillary system, and tightness of the skin, that is peculiar to fevers. Arterial excitement may be modified by them, and thus congestions are prevented or overcome.

Special Antispasmodics.

LOBELIA.

Lobelia inflata, without doubt, stands at the head of our antispasmodics. Nor are these properties of the medicine less remarkable for their effects, than the emetic, or any other that it possesses. Spasms of every kind, yield to the lobelia with astonishing promptness. The most violent spasms that attend hydrophobia, or apoplexy, have been known to yield to it in from 15 to 20 minutes. It may therefore be used with confidence in all cases in which medicines of this class are

indicated. The dose, as an antispasmodic, in violent cases, is a teaspoonful of the pulverized seed, repeated as often as it is thrown up, or once in from ten to fifteen minutes. The medicine should, in urgent cases, be administered by enema at the same time. For use as an antispasmodic, this article is usually combined with others of this class:—See antispasmodic tincture, among the compounds.

CAULOPHYLLUM THALICTROIDES.*



Blue Cohosh, Blueberry.

Sexual System—Class 6; order 1.

Description.—Root perennial, extremely fibrous, and of a dirty white or brown color. Stem smooth, erect, divided into

**Leontice Thalictroides.*—*Linnaeus.*

three branches at the top. Leaves pinnate, smooth, and palmate or lobed, with three, seldom five folicles, the lateral ones nearly sessile, oblong, unequally bifid, and acute. The terminal folicle is separated, larger than the rest, having five, rarely three unequal lobes or segments. Flowers yellowish green, small, and situated in a loose corymb in the forks of the stem or branches, these are followed with blue berries of the size of a cherry stone.

Locality and habits.—The blue cohosh is an indigenous plant, very common in some of the Western States, growing in rich moist soil in open woodlands. It blossoms in May and June.

Medical properties and uses.—The blue cohosh is antispasmodic, emenagogue, and diaphoretic. The medicine is certainly worthy of a high place among our indigenous medical plants, although it has not as yet received much attention by authors. The Indians of our country, it seems, practiced its use very extensively as an antispasmodic and emenagogue. When first taken, the medicine imparts a very unpleasant taste, and scratching sensation to the mouth and fauces, and is hence not without some objection as a general antispasmodic.

This article seems to exert a peculiarly healthy influence over the muscular fibre, and is hence valuable as a common drink in transient cases of cramp, and in rheumatism, chorea and subsultus tendinum.

The decoction or infusion of blue cohosh, is highly recommended as a drink before, and during parturition. It is to the use of this article during the last month of pregnancy, that the great facility in parturition, so common among the Indians, is ascribed; although in this, the virtues of the medicine are certainly overrated.

When used in substance, the dose of the pulverized root is from 15 to 20 grains; but the infusion is generally preferred: an ounce of the root is scalded in a pint of water, and left to steep for an hour on a hot stove or coals. Of this the patient is required to drink freely at suitable intervals.

FERULA ASSAFŒTIDA.

Assafœtida.

Sexual System—Class 5; order 2.

Description.—The plant yielding the drug of commerce, according to the U. S. Dispensatory, bears the following description: "The root is perennial, fleshy, tapering, when of full size, as large as a man's leg, beset with many small fibres near the top, externally blackish, internally white, and abounding in an excessively fœtid, opaque milky juice. The leaves, all of which spring immediately from the root, are six or seven in number, nearly two feet long, bipinnate, with the leaflets alternate, smooth, variously sinuated and lobed, sometimes lanceolate, of a deep green color and fœtid smell. From the midst of the leaves rises a luxuriant, herbaceous stem, from six to nine feet in height, two inches in diameter at the base, simple, erect, round, smooth, striated, and terminating in large plano-convex umbels with numerous radii. The flowers are pale yellow; the seeds oval, flat, foliaceous, and of a reddish-brown color. The plant is said to differ greatly both in the shape of its leaves, and the character of its fœtid product, according to the situation and soil in which it grows."

The assafœtida gum as found in the shops, is in reddish-brown irregular masses. When broken it presents an irregular yellowish-white surface, somewhat shining in appearance, but on exposure to the air it soon turns to a purplish-red, and afterwards to a reddish-brown, as above.

Locality and habits.—This plant is a native of Persia, and perhaps other eastern countries, flourishing very abundantly in the mountainous countries of Chorrassan and Laar, where the juice is collected by cutting the root transversely at repeated intervals while in the ground,—the juice exuding from the wounded surface.

Medical properties and uses.—The assafœtida gum is an excellent antispasmodic, and is also stimulant, expectorant, and slightly laxative. It is peculiarly adapted to the treatment of hysterical affections, convulsions in children, epilepsy, col-

ic pains, cramp in the stomach and bowels, dyspepsia, and pectoral diseases. The usual forms of its use, are in pills and tincture. One common sized pill, or a tea spoonful of the tincture is a dose, which may be repeated once in an hour or two until relief is obtained.

VALERIAN.—Both the English and American (Lady's slipper) Valerian, are excellent antispasmodics, and may be used as such with confidence, especially in cases of hysterical fits, delirium tremens, subsultus tendinum, and in some cases of epilepsy.

SCULCAP, (*Scutellaria lateriflora*.)—This article is of late gaining considerable popularity as an antispasmodic. It may be used in combination with other antispasmodics, in all cases in which articles of this class are indicated.

SKUNK CABBAGE, (*Ictodes fætida*)—The root of this plant is an excellent antispasmodic. It has been used as such for a long time, and will generally maintain its character in ordinary cases. It must be taken in substance in teaspoonful doses.

MUSK.—Excepting the lobelia, there is perhaps not another so powerful an antispasmodic. But its unpleasant odour, and comparatively high price, however, makes its use less extensive. It is a valuable remedy in all kinds of convulsions, spasmodic asthma, hicup, &c. The medicine is usually given in substance; the dose is from 6 to 30 grains.

CASTOR.—This, like the musk, is an animal production, procured in cold Northern countries, as in Poland, Russia, Siberia, Thibet, and Tartary. The castor is a good antispasmodic, but is now chiefly restricted in its use to hysterical affections.

OIL OF AMBER, (*Oleum succini*.)—This article has generally been regarded as meriting a place among the antispasmodics. It is now principally used in spasmodic affections of the genital organs.

Carbonate of ammonia, camphor, galbanum, gum ammoniac, garlic, cayenne pepper, ether, and many other articles not here treated as such are in occasional use as antispasmodics, and not a few of them are valuable.

CHAPTER V.

Medicines affecting most prominently the Uterine System.

I. EMENAGOGUES.

Emenagogues are a class of medical agents that promote menstruation. It is, however, doubted by some authors, whether there are any articles that have a specific effect on the uterus. But although the sanguine practitioner may, in some instances, be disappointed in the use of some of his agents of this class, yet it seems that the majority of our most experienced practitioners, are free to give their convictions in favor of the specific emenagogue effects of many of our remedies of this class. It seems, moreover, that even those who appear to be the most sceptical on this point, are in the constant habit of prescribing articles of this class to fulfil the appropriate indications.

Special Emenagogues.

CIMICIFUGA RACEMOSA.*

Black cohosh, Rattle weed, Black snakeroot, Squaw root.

Sexual System—Class 12; order 1.

Description.—Root perennial, contorted or knotty, irregular, black without, with numerous long black fibres. Stem erect, round, smooth, and divided above into three branches, which divide again into three smaller ones each, forming the petioles of the leaves. The leaves are large, and alternately decomposed, having oblong, lanceolate, acute, and deeply serrated leaflets. The flowers are small, white, and disposed in a beautiful, long, terminal, wand-like raceme that rises sometimes six or eight feet from the ground. The flowers are followed with small, ovate capsules, that continue on the stem through the winter, or until broken down.

*This plant is here described, on the authority of the U. S. Dispensatory, as belonging to CIMICIFUGA; yet it perhaps justly belongs to the Asteidea family. This view is strongly corroborated by Rafinesque, who calls it BOTROPHIS, making it a sub-genus of the ACTEA. It is called MACROTYS by Eaton and others.

CIMICIFUGA RACEMOSA.



Black Cohosh, Rattle Weed, Black Snakeroot, Squaw root.

Locality and habits.—This stately plant beautifies nearly all our western bottom lands, and rich hill-sides. It flowers in June and July.

Medical properties and uses.—The black cohosh is perhaps the best emenagogue that we possess. It is also a good nervine, and anti-spasmodic, removing chorea, epilepsy, and many other affections of this kind. It also promotes the secretions of the general system very remarkably, especially those of the respiratory organs. It is also an invaluable remedy in rheumatism; the writer has used it for this purpose with general satisfaction. Still its most valuable properties, perhaps, are the emenagogue.

The medicine, when used as an emenagogue, should be taken at, or commencing a little before the time of the usual evacuation, and continued freely until the desired effect is produced, at the same time using such other means as are best calculated to favor the object, as the foot, hip, or vapor bath, &c.

Black cohosh is commonly taken by infusion, but the tincture is also good. The infusion is prepared by scalding an ounce of the powdered root in a pint of water, and letting it steep for an hour on a hot stove or coals; of this the patient should take a wine-glassful every hour until it affects the head with a sensation of vertigo or dizziness, after which the dose should be lessened. The dose of the tincture is a table-spoonful three or four times a day.

ACTEA ALBA.

White cohosh, White bane-berry.

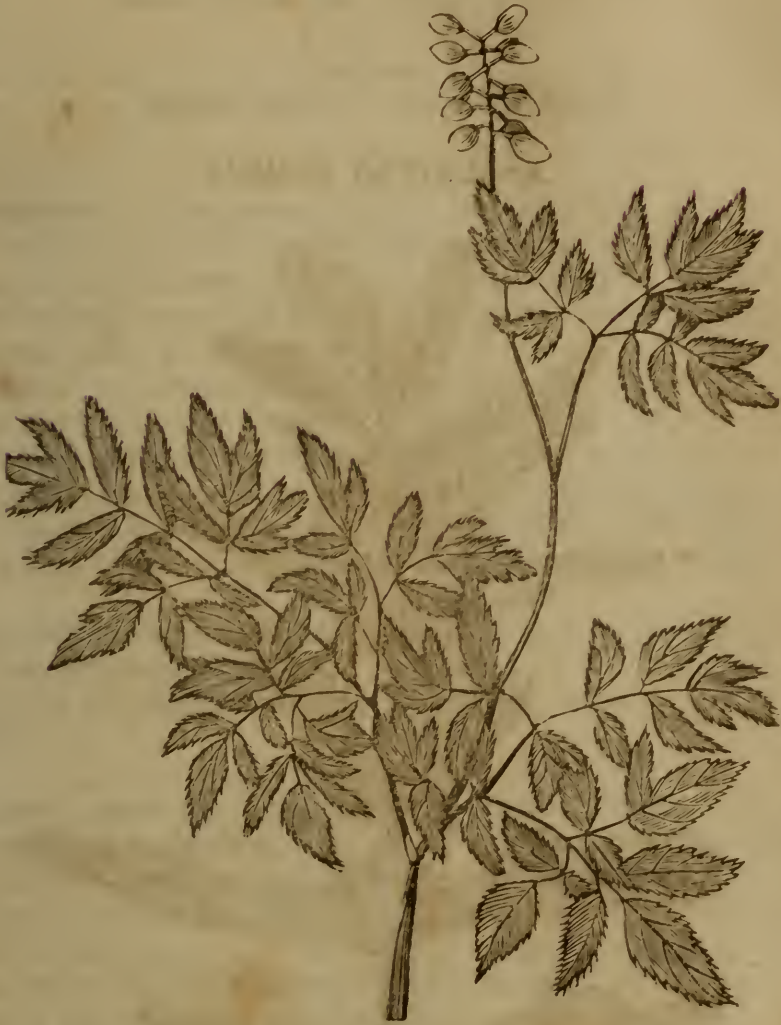
Sexual System—Class 12; order 1.

Description.—The root, stem, and leaves of this plant, very closely resemble those of the black cohosh, which evidently belongs to this family.—See *Cimicifuga Racemosa*.

The stem of the white cohosh, however, is not quite so long as that of the black, and perhaps the leaves are not so large as those of the latter. The fructification of the white cohosh, also differs considerably from that of the black. It consists of a comparatively short peduncle, arising from the junction of the petioles of the leaf, bearing a cluster of oblong, white berries, which are situated on short, red, stems

supported on the common peduncle,—the whole in form somewhat resembling a bunch of grapes.

ACTEA ALBA.



White Cohosh, White Bane-berry.

Locality and habits.—The white cohosh, and another species called Red Cohosh, very closely resembling this, differing only in the color of the berries, (which in that are red,) are indigenous to this country, and are found, though not very plentifully, in the middle and western states.

Medical properties and uses.—The medical properties of the white cohosh are very similar to those of the black, especially

as regards their emenagogue powers,—both articles standing in the first rank of this class; the dose is the same as that of the black. The red cohosh is also regarded as an emenagogue. The berries of both the white and red, are said to be poisonous, and hence the name *baneberry*.

ASCLEPIAS SYRICA.



Cotton Weed, Silk Weed, Wild Cotton.

ASCLEPIAS SYRICA.

Cotton Weed, Silk Weed, Wild Cotton.

Sexual System—Class 5; order 2.

Description.—Root perennial, horizontal, white, of considerable length, and with but few fibres. Stem erect, round, of a green color, and from two to five feet in height. Leaves opposite, oblong, round at both ends, entire, smooth, green on the upper side, white and prominently veined underneath.—Flowers of a pale purple, sweet-scented, and situated in large round clusters, rising axillary to the leaves. The flowers are followed with pods, containing the seed and seed-down. The pods are about an inch or more in diameter, perhaps three inches in length, obtuse at the base, and pointed at the other end. The entire plant, when wounded, exudes a thick milky juice.

Locality and habits.—This beautiful plant is indigenous to this country, and grows very plentifully on sandy plains, road sides, and on the banks of streams. It flowers in July and August.

Medical properties and uses.—The cotton weed is a good emenagogue, possessing also anodyne properties of considerable value. Its emenagogue powers have of late been well attested in numerous cases. While using the medicine, the patient should endeavor to promote its good effects by drinking a tea of the black cohosh, bathing the feet in warm water, and applying such other means as are calculated to accomplish the object. The dose of the pulverized bark of the root is from 20 to 30 grains, three to four times a day; of the tincture a table spoonful is taken three times a day.

LEONURUS CARDIACA.

*Motherwort.*

Sexual System—Class 13; order 1.

Description.—This is a well known naturalized plant, growing about door yards, wood houses, and stables. It has a square stem, about two or three feet in height. Its leaves are rough, tri-lobed, serrate, opposite, and supported on long slen-

der petioles. The flowers are small, and situated in clusters around the stem, axillary to the leaves; their calixes forming a bunch of very sharp prickles.

Medical properties and uses.—Motherwort possesses emenagogue and tonic properties. It has for a long time been a popular remedy in domestic practice. It is best used in combination with the black cohosh, or some other more powerful article. The dose is a wine glassful of a strong infusion, made of the leaves, either in the dry or green state. The tincture is used in table spoonful doses.

PENNYROYAL, (*Hedeoma pulegioides*.)—The pennyroyal has for a long time been regarded as possessing emenagogue powers. It is much used in domestic practice with a view to these powers; nor has the profession been indifferent to its merits, as an agent of this kind. The medicine is gently stimulant in its effects, invigorating vital action, and promoting the natural functions of the various organs. In order to exhibit its emenagogue effects, the medicine must be taken in large and frequent doses: an ounce of the leaves and seed should be scalded in a pint of water and taken freely at short intervals,—the patient sitting before a good fire, with the feet in a vessel of warm water; or what is better, the vapor or hip bath may be applied. The oil is sometimes preferred; the dose of this is from ten to twenty drops, taken with sugar.

TANSY, (*Tanacetum Vulgare*.)—This well known garden plant is one of the most common articles used in domestic practice for menstrual obstructions. The medicine is an aromatic stimulating tonic, invigorating the system, and promoting the excretions. The dose is a wineglassful of the strong infusion three or four times a day, with other means to promote its effects.

ROSEMARY, (*Rosemarinus Officinalis*.)—This is an evergreen shrub, that is a native of Asia Minor, and other parts bordering on the Mediterranean, but is now cultivated in gardens, in Europe and in this country. The whole shrub has a strong aromatic or balsamic smell, and pungent and warming taste. The flowering summits of the branches, however, are the parts chiefly used for medicinal purposes.

The rosemary is considered emenagogue in its effects. The writer has never used it as such; and cannot therefore speak of its effects in this way, from his own experience; but its diffusive stimulant powers seem to promise something in its favor as an emenagogue. The dose is from three to ten drops of the oil, taken on sugar.

MADDER, (*Rubia tinctorum*.)—This is a perennial plant much cultivated in Europe as an article of commerce.

Madder is said to possess emenagogue powers, and is recommended as such, in doses of from 20 to 30 grains three times a day. When taken, it stains the bones of animals red, but is not generally supposed to possess any poisonous properties.

SENEKA SNAKEROOT, (*Polygala senega*.)—This article is a pretty good emenagogue, and as a medicine of this class, is much depended on by old school physicians, although it is much inferior to the black cohosh, and several other articles used by the reformers. The dose is a tea spoonful of the pulverized root, once in three or four hours.

SMART-WEED, (*Polygonum hydropiperoides*.)—This article is very highly recommended by Dr. Eberle, as an emenagogue. The medicine, however, should not be scalded in its preparation, as this process very much impairs its virtues. The powdered leaves may be taken in substance, in tea spoonful doses; or the tincture prepared from the same, may be taken in the same doses, three or four times a day. This latter, is the form in which Prof. Eberle was in the habit of using it.

ALOES.—The emenagogue properties of this article are pretty generally known, and need no commendation. The dose is from five to ten grains three times a day. The medicine is best taken in combination with cayenne pepper and myrrh, in the form of pills. When the patient is troubled with hæmorrhoids, aloes is objectionable.

GUM MYRRH, (*Myrrha*.)—The common tincture of myrrh is a pretty good emenagogue, and may be used in teaspoonful doses, in connection with other medicines of this class, to warm up the system and promote the good effects of the other medicines.

WILD GINGER, (*Asarum canadense*.)—This is a pleasant aromatic, stimulant, and emenagogue. The dose is a teaspoonful of the powdered root, three or four times a day; or a strong infusion may be taken freely.

CAYENNE PEPPER.—This, as well as most other active stimulants, is emenagogue in its effects. It is not a difficult matter to discover how a general excitant may prove effectual in relieving particular obstructions. It will be seen by this principle, that the lobelia, if properly used, will prove itself an emenagogue of no mean character.

The oil of savin, and the black hellebore, have for many years been popular articles of the emenagogue class, among old school physicians; but they are not sufficiently safe in their use, and should be rejected.

CHAPTER VI.

Medicines affecting various organs.

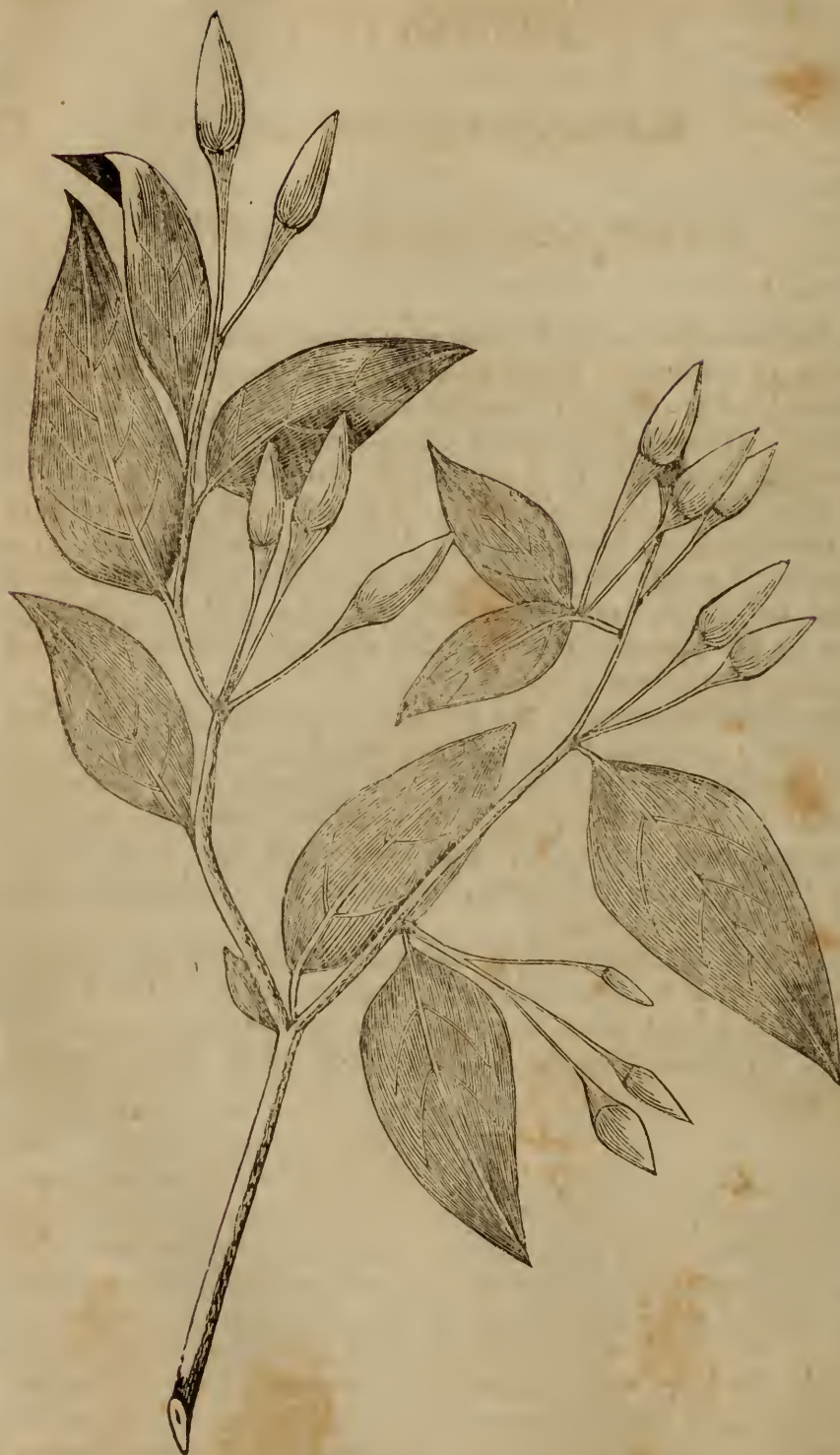
I. STIMULANTS OR EXCITANTS.

In the broadest or most extensive signification of the term *stimulus* or *stimulant*, every article of the *materia medica* is embraced, as we cannot conceive of any effect in the living economy, without admitting a *stimulating* or *exciting* cause corresponding with the effect produced. In other words, to *effect* or *produce action*, is to *stimulate*. For the sake of distinction and convenience, however, the term *stimulant* is used in a comparative sense, to distinguish such articles of the *materia medica*, as evince very prominent, exciting, and invigorating effects on the nervous and vascular systems, without giving rise to any particular evacuation.

With this definition of the term, it is evident that this class of agents is perhaps the most important in the *materia medica*; for as the primary cause of all diseases is a DIMINISHED CONDITION OF THE VITAL POWERS, or in other words, a want of paramount vital resistance, those medicines that have a tendency to stimulate, invigorate, and assist the vital powers, are of all the most important.

Stimulants are particularly indicated in all marked cases of debility, as in low fevers, cholera, dysenteries, &c. The effects of most other medicines are also much promoted, in many instances, by combining or administering with them proper stimulants.

CAPSICUM BACCATUM.

*Bird Pepper, Cayenne Pepper.*

CAPSICUM BACCATUM.

Bird Pepper, Cayenne Pepper.

Sexual System—Class 5; order 1.

Description.—The genus *capsicum*, proves itself a very extensive family. The West Indies produce many different species. It seems, according to Mr. Hughs, in his history of Barbadoes, that this island alone produces some twelve or fifteen different species. The number of the different species in the East Indies, is perhaps still greater; and this may also be said of Africa, and perhaps of South America. In the United States and Europe, there are at least from fifteen to twenty different varieties cultivated. It is true that many of these different species of *capsicum*, counted in these several countries, may be the same; yet the genus, is no doubt much more extensive than it has been generally supposed.

The bird pepper is common both in Africa and the West Indies, and is generally considered the best of all the peppers; and of this, that cultivated in Africa, is also usually preferred. This species is a perennial plant, with a greenish, woody, branching stem. The leaves are lanceolate, entire, smooth, acute, and of a beautiful green color. The blossoms are white, and small. The pod or seed vessel, is about three-quarters of an inch in length, and about a quarter of an inch in thickness. It is of a conical shape, with a rounded base, and when ripe, of a light red color.

The *capsicum* brought to us from the East Indies is considered much inferior to that coming from Africa, or the West Indies. It consists of curved, tapering, pods about an inch and a half or two inches in length, and when ripe, of a yellow or bright orange color. It is brought to us from Bombay or Calcutta in great quantities, and is distinguished here as the Bombay, East India, or Chilly peppers.

All, or any of these varieties of pepper, are generally ground up together indiscriminately, and are known under the name of *cayenne pepper*.

Those varieties of *capsicum* cultivated in this country and Europe, are annual, herbaceous plants, growing from a foot to eighteen inches in height. The pods are generally large,

and of a crimson, scarlet, orange, or deep yellow color. As a medicine, they are much inferior to the bird pepper.

Medical properties and uses.—Capsicum is the purest, most prompt, powerful, and permanent stimulant known. When taken, it produces a very pungent and biting sensation in the mouth, which is much increased by the contact of the air.—The sensation produced in the stomach is warming, but as a general thing, by no means unpleasant.* Soon its congenial stimulating effects will be felt diffused by the circulation throughout the body, producing a very agreeable exhilarating and reviving influence.

Cayenne pepper is extremely diffusive in its effects, and evinces a remarkable power of equalizing the circulation. It is therefore very applicable as an internal and general remedy, in inflammations, and congestions in fevers. In these cases, it will not increase the feverish and inflammatory condition, as is generally supposed by those unacquainted with the medicine.

When used in fevers, the skin must always be kept in a free and relaxed condition by the collateral use of some of the relaxing antispasmodics, as the lobelia, thoroughwort, &c.—Thus while the system is relaxed, the vital energies may be assisted to repel and overcome disease.

The medicine is particularly applicable in all cases of enfebled vital reaction. Its use should never be neglected in low fevers, choleras, palsies, suspended animation, violent hemorrhages, and severe cases of dysentery.

Cayenne pepper is very servicable in dyspepsia or weak digestion. Its continued use will remove chronic constipation of the bowels.

As a gargle, in the putrid sore throat of scarlet fever, this article has gained great popularity, even among old school practitioners. In mortification, the medicine, as a local and general remedy, is of incalculable benefit.

Capsicum is one of our best rubefacients; and, incorporated with pitch, it forms plasters of great value in cases of chronic difficulties, as affections of the spine, hip, liver, lungs, and spleen.

The use of capsicum in febrile and inflammatory affections, appears singular enough to old school practitioners, as they have entirely mistaken its effects on the living animal economy. They view the medicine as being itself calculated to

* When the stomach is cold, contracted, and very irritable, the capsicum sometimes produces considerable pain in this organ for a short time.

produce an inflammatory and febrile condition of the system, and are no little astonished at its real effects when by chance they witness them. The effects of this single article have been the cause of the change of the views of scores of old school practitioners, with reference to the merits of the reformed system of medicine.

An aged alopathic physician and a very learned and experienced man, in the acquaintance of the writer, after suffering for many years with a disease of the heart, and after having lost all confidence in medicine, and having been repeatedly given up to die, was at length prevailed upon by a humble reformer to try the effects of cayenne pepper. The result was, that in the space of about nine months the Doctor was completely restored to health.

The dose of cayenne pepper varies much according to the object of its use, but as a general thing, from five to twenty grains of the powder or tincture is taken. The medicine is, however, generally taken in combination with other articles.

ZINGIBER.

Ginger.

Sexual System—Class 1; order 1.

Description.—The root of this plant is biennial or perennial, creeping, and tuberous. The stem is annual, two or three feet high, erect, solid, round, and inclosed in imbricated sheathing. The leaves are alternate, smooth, lanceolate, and acute. The flowers are of a dingy yellow color, and appear two or three at a time, between the bracteal scales, and have an aromatic smell.

Locality and Habits.—Ginger is a native of Hindoostan, but is cultivated throughout both the East and West Indies.

Medical properties and uses.—This is an agreeable aromatic stimulant, considerably diffusive and permanent in its effects, and is an excellent substitute for cayenne pepper, especially

when given to children. It is a good carminative, frequently relieving pain in the stomach and bowels. It is an excellent addition to bitter infusions, and tonic preparations, giving to them an agreeable cordial operation upon the stomach. Applied to the surface, it acts as a rubefacient.

Ginger forms a valuable local application, in the form of a poultice, for the treatment of indolent ulcers, cancers, and scrofula.

PIPER NIGRUM.

Black Pepper.

Sexual System—Class 2; order 3.

Description.—The vine which bears the black pepper berries, grows to the length of twelve feet. The stem is round, smooth, woody, articulated and perennial. The leaves are of a deep green color, entire, smooth, ovate, acuminate, and attached to the joints of the branches. The flowers are sessile, white, supported by a cylindrical spadix, and are followed by round berries, which are red when ripe.

Locality and habits.—This plant grows wild in Cochin-China and India, and is cultivated in many parts of Asia, and the Asiatic Islands. It is propagated by cuttings, and supported by trees or props, provided for the purpose. It requires three or four years from the time of planting, before it bears fruit. The berries are gathered before they are ripe, and dried--hence their black and shrivelled appearance.

Medical properties and uses.—Black pepper is a warming stimulant, developing its effects throughout the whole system, to a considerable extent, although it produces its most permanent impression on the part to which it is immediately applied. It is frequently given with success in intermittent fevers, but is more especially valuable in flatulency, indigestion, nausea, and want of appetite, &c. It is an excellent article in bilious, and other colics, frequently affording immediate relief.

An infusion of the black pepper frequently arrests the exhausting diarrhœa consequent upon scarlet and typhus fevers.—The common dose is a tea spoonful of the powdered berries steeped in a cupful of water; or it may be taken in substance; or steeped in boiling milk, which renders it more agreeable to take, than when prepared in any other way. The dose may be repeated in one or two hours, according to circumstances. Some highly recommend taking the seeds in the form of pills, in the intermittent fever. Dr. Louis Frank, physician to Maria, Duchess of Parma, cured fifty four out of seventy patients by the use of this means. He gave eight or ten of the seeds a day, and almost always effected a cure with the use of seventy or eighty of them.

MYRRHA.

Gum Myrrh.

Gum myrrh is the product of a shrubby tree, growing in Arabia and the East Indies. As brought to us, it consists of irregular reddish brown masses, of various sizes. It has a strong, but not disagreeable odour, and a pungent bitterish taste. That which is clean, and light colored, is usually the best.

Medical properties and uses.—Myrrh is stimulant, diaphoretic, tonic, antiseptic, and emmenagogue. When used as a stimulant, it is usually prepared in tincture with brandy:—see tincture of myrrh. The tincture of myrrh is justly a very popular medicine; it is in equal favor with families and practitioners.

The medicine is especially serviceable in all low fevers, cholera, dysentery, scurvy, palsy, mortification and asphyxia. It is also commonly prescribed, for colds, colic, diarrhœa, pain in the breast, rheumatism, gout, &c. The dose is a teaspoonful or more of the tincture.

CAMPHORA.

Gum Camphor.

Camphor is a white gummy substance, of a very strong peculiar smell. The gum is produced by different species of the Lauraceæ family, and perhaps by others. The medicine is so well known that it needs no further description.

Medical properties and uses.—Camphor is an active stimulant, and anodyne. It is applicable in cases of pains in the breast, stomach, and bowels; and in hysterical affections, faintness, &c. It is also much used as an external application.

The usual form in which the medicine is used, is in tincture, commonly called *camphire*. Of this the dose is from a teaspoonful to a tablespoonful.

AMMONIÆ CARBONAS.*Carbonate of Ammonia.*

This article is prepared by pulverizing separately, a pound of muriate of ammonia (Sal. ammoniac,) and a pound and a half of chalk,—mixing them thoroughly, and subliming with a gradually increasing heat.

Medical properties and uses.—Carbonate of ammonia is an active stimulant, diaphoretic, antispasmodic, and antacid.—As a stimulant it is particularly useful in typhus, typhoid, and low remittent fevers, especially when there is subsultus tendinum. The writer has witnessed some of the most happy effects from its use in these cases. The medicine is also highly recommended as a remedy in gout, and chronic rheumatism.

SPIRITUS VINI GALLICI.

Brandy.

Brandy is obtained by distillation from wine, and is among the strongest spiritous liquors that we possess. The fourth proof French brandy is the best for medical purposes.

Medical properties and uses.—Brandy is an active stimulant, but is not very permanent in its effects, and is hence not generally much used by reformed practitioners simply as a stimulant; but is more used as a solvent for the gums, and other medicinal substances. It is generally used as a menstruum, in making tincture of myrrh, &c. Brandy is, however, sometimes given to patients low with typhus and other fevers.—In these cases the dose is a teaspoonful or more. But a more usual form of its use is in panada, or toddy.

VINUM.*Wine.*

Wine is a spiritous fluid,—the result of the fermentation of grape juice. There are a number of different kinds in market, but those most commonly used for medicinal purposes are the *Sherry*, *Madeira*, *Teneriffe*, *Port*, and *Claret*. *Sherry* is a sweet wine, containing about 20 per cent. of alcohol by measure, and has a dry aromatic flavor. *Madeira* and *Teneriffe*, are slightly sour, and in strength nearly correspond with sherry. *Port* is of a deep-purple color, strong, astringent, and slightly sweet. It usually contains a considerable quantity of brandy. *Claret* is a red wine, containing a small proportion of alcohol,—has a delicate taste, is slightly acid, and somewhat astringent.

Wines are generally used in cases of debility in aged persons, in low fevers, and in slow and tedious convalescence.

As a stimulant, port wine is rather the best; but some of the other varieties, sometimes agree best with the stomach, as well as the taste.

Wine may be given in its pure state, or in the form of *wine-whey*. This is prepared by putting a gill or more of wine into a pint of boiling milk,—seperating the curd by straining, and then sweetening the whey that remains, with loaf sugar.—Wine whey is of peculiar service in low typhoid fevers, acting as a healthy stimulant, while it often promotes perspiration. The quantity of wine necessary to be used, depends upon circumstances. In sinking states of the system, a pint has been used in a few hours. It may be given in doses of a tablespoonful or more, and repeated as the effects or circumstances may indicate.

MENTHA PIPERITA.

Peppermint.

Sexual System—Class 13; order 1.

Description.—This is a verry common plant, and needs but little description. It was introduced into this country from Europe, and grows in gardens, and in wet places, along streams, &c. In many places it is cultivated for distillation.

Medical properties and uses.—Peppermint is an aromatic stimulant, analagous in its effects to cayenne pepper, though considerably less permanent. It forms a very grateful drink in fevers, on account of the cooling sensation it produces in the mouth. It is peculiarly serviceable in allaying nausea, relieving pains in the stomach and bowels, expelling wind, in covering up the disagreeable taste of other medicines, and in preventing the griping effects of cathartics. It is commonly used in infusion. The dose of the powdered leaves is a tea spoonful, to a teacupful of hot water, and repeated according to circumstances. The essence is taken in tea spoonful doses.

SPEARMINT, (*Mentha Viridis*.)—This article possesses proper-

ties, as a stimulant, very analagous to the peppermint, and as such may be used in its place. It is also valuable as a diuretic and vermifuge.

CINNAMON, (*Laurus Cinnamomum*.)—This is an agreeable aromatic stimulant, possessing considerable power as a stomachic and carminative. It is generally used as an ingredient in medicinal compounds, but may be employed alone as a warming medicine for the stomach, to allay nausea, or to correct flatulency. It forms a valuable ingredient in tonic compounds, and in preparations for the cure of diarrhœa, &c. The pulverized bark, or the essence, may be used in tea spoonful doses.

CLOVES, (*Caryophyllus Aromaticus*.)—This is an aromatic stimulant, and is much employed in medicinal compounds. Used alone, it is of service in flatulency, colic, nausea, and faintness. It is extensively used as an ingredient in diaphoretic preparations. The dose is a small tea spoonful.

DITTANY, (*Cunila Mariana*.)—Dittany is a valuable stimulant, tonic, nervine, and aromatic. It is highly esteemed in some parts of the country, in domestic practice, for the relief of headaches, colds, fevers, hysterics, and other complaints, where a stimulating diaphoretic would be proper. The advantage in the use of this medicine, is that while it is an active remedy, it is at the same time very pleasant to take.

HORSE MINT, (*Monarda punctata*.)—This is an indigenous plant of considerable value as a stimulating diaphoretic, and is said also to possess active diuretic properties. The horse mint, combined with other stimulants, may be used as a change in cases of protracted illness, where stimulants are required for a considerable time.

WILD MARJORUM, (*Origanum Vulgare*.)—As an active stimulant, the wild marjorum is inferior to few of our indigenous herbs. The dried leaves may be used freely in infusion, or the essence may be taken in tea spoonful doses. The oil is an excellent rubefacient.

SASSAFRAS, (*Laurus Sassafras*.)—The bark of the root of this article, is stimulant and antiseptic. It is, however, chiefly used as an external application, in the form of a poultice, for mortification, foul ulcers, king's evil, &c. The oil is an active rubefacient.

II. TONICS.

Tonics are medicines which give vigor and tone to the system, without increasing the heat of the body, or, as a general thing, materially effecting the pulse.

It has been supposed by Cullen and others that the tonic power of medicines depends upon their bitterness; and at first thought, this idea would seem to be correct, as it is a fact that nearly all our best tonics are extremely bitter substances.— Yet it is established by experiments, as well as by observation, that some articles that are but slightly bitter, are, nevertheless, very good tonics; and on the other hand, there are some again that are very bitter and yet are of but little value as tonics.

Tonics are indicated in nearly all cases of debility, and are ever servicable to restore the patient after the force of the disease is broken up. In intermittent and remittent fevers, it is almost impossible to succeed without the use of these agents; and the treatment of most other diseases is imperfect without them.

The application of this class of remedies has not been so particularly pointed out in the part treating on practice, excepting in those cases in which the tonics are indispensably necessary; for it was supposed that the practitioner, once learning their general application, could not fail in discovering readily, all the indications for their use.

When the protracted use of tonics is required, the articles taken should be occasionally changed, as the system soon becomes habituated to them, which makes their further use less beneficial, than other articles of this class.

Special Tonics.

CORNUS FLORIDA.

Dog wood, Box wood, American Cinchona.

Sexual System—Class 4; order 1.

Description.—This is a small tree growing throughout the

United States. It has an extremely rough bark externally, which is redish within. It generally attains to the height of 20 feet, or more, with crooked, spreading, branches; the small ones of which bear the marks of the old leaves. The leaves are opposite, ovate, lanceolate, serrate, and of a pale color beneath. It flowers early in the spring, and bears oblong red berries, disposed in clusters.

Medical properties and uses.—The dog wood is tonic, astringent, stimulant, and like many other articles of the class, antiseptic. As a tonic it is second to none, and equalled only by Cinchona as an anti-periodic. Although it is actively astringent, there is no danger of producing constipation of the bowels by its use, but it, on the contrary, often produces a laxative effect, especially when fresh. It has long been employed as a substitute for Peruvian bark, the action of which it very much resembles, and from which circumstance it has received the name American Cinchona. It is useful in all cases where tonics are indicated, and especially serviceable in leucorrhœa, prolapsus, dyspepsia, liver complaints, &c; but the most striking effects are observed by its use in intermittents, which it cures with nearly the same certainty as the Sulphate of Quinine. It has heretofore been recommended to be used in decoction, but it is evident that it does not readily yield its properties to water, for the watery extract is nearly inert, and by this circumstance the medicine has, in a great measure, fallen into disuse. In fevers of the sthenic character, none of its preparations are proper, but in those of a low character they are particularly indicated. In intermittents the finely pulverized bark may be given in 25 grain doses, repeated every two hours, between the paroxysms. The dose of the alcoholic extract is from 5 to 10 grains.

HYDRASTIS CANADENSIS.

Golden Seal, Yellow Puccoon.

Sexual System—Class 12; order 13.

Description.—This is an indigenous plant, with a yellow perennial root an inch or more in length, contorted, irregular,

and giving off quite a number of very yellow fibres. The stem is round, hairy, from six to twelve inches high, and divided at the top into two petioles, of unequal length. The leaves, which are two in number, are lobed or palmate, unequal, serrate, and somewhat resemble the leaf of the maple tree. It bears a single terminal, flesh-colored flower.

HYDRASTIS CANADENSIS.



Golden Seal, Yellow Puccoon.

Locality and habits.—Golden seal is found principally in the States West of the Alleghany mountains, growing in forests, at the foot of hills, or in vallies, always preferring a rich soil.

Medical properties and uses.—This is an excellent bitter tonic. It seems to have a peculiar effect upon the stomach, promoting its healthy functions, removing indigestion, and relieving the disagreeable sensations which the use of food frequently produces when the digestive organs are impaired. It also acts upon the liver, regulating its secretion, and by this means promoting a healthy condition of the bowels. It may be employed with advantage in intermittent and remittent fevers, jaundice, worms, in colic, faintness or weakness at the stomach, &c. The infusion forms an excellent wash for sore eyes, and in this form it is a valuable application to old sores. For internal use it may be taken three or four times a day, in the form of powder, in teaspoonful doses in warm water sweetened—repeating the doses as the symptoms may indicate.—The infusion may be used if preferred. The root is the part employed in medicine.

FRASERA VERTICILLATA.

American Colombo.

Sexual System—Class 4; order 1.

Description.—Root triennial, long, fusiform, yellowish, branched, and fleshy. Stem solid, smooth, erect, round, and from five to ten feet high. Leaves of a deep green color, entire, sessile, glabrous and disposed in whorls, commencing at the root and ascending to the summit with regularly diminishing intervals, and becoming smaller as they ascend. The lower leaves are oblong, and lanceolate; the upper ones, lanceolate and pointed. The radical leaves, from five to twelve in number, are procumbent, elliptical, and obtuse. The flowers are yellowish-white, numerous, forming a large pyramidal, terminal panicle, a foot or more in length.

Locality and habits.—This plant is found in all parts of this country,—excepting the regions East of the Alleghany mountains,—growing in open woodlands, in sandy soils, and in meadows.

Medical properties and uses.—The colombo root, when dried, possesses valuable tonic properties. It is also laxative, and antiseptic. In cases of debility arising from indigestion, it generally affords relief. It may also be employed with advantage in colic, nausea, diarrhœa and to remove the disagreeable sensations, produced by food, common with dyspeptics. As an antiseptic it may be used internally by infusion, —externally, in decoction, or in the shape of a poultice.

For internal use, the dose is a teaspoonful of the powdered root, in warm water. The fresh root, is emetic and cathartic.

GENTIANA.

American Gentian.

Sexual System—Class 5; order 2.

Description.—There are a number of species, and many varieties of gentian, all having a pretty close resemblance to each other, and generally possessing nearly the same medical properties. The yellow gentian, however, is the kind that is mostly used by the reformed practitioners. This plant has many long spindle-shaped roots, which have a thick fleshy bark, and woody centre. The stalks, which are from six to twelve or more in number, are somewhat reclining, and about two feet in height. The leaves are oblong, smooth, entire, and perforated by the stem. The flowers are axillary to the leaves, and are followed by beautiful, oblong, red berries, crowned with the calyx.

Locality and habits.—Gentian may be found in nearly every section of the United States, usually choosing dry soils, road sides, old fields, and commons.

Medical properties and uses.—The root of this plant constitutes one of our most valuable bitter tonics,—is also stimulant, alterative, laxative, and in large doses cathartic. Perhaps no single article in the materia medica will produce better and

more permanent effects in the cure of liver affections than this. The most doubtful cases have been known to yield to its powers in a comparatively short time, even after the skill of the doctors had been exhausted to no purpose.

It promotes digestion, relieves heartburn, will correct a constive state of the bowels, and may be used, successfully in all cases where a bitter tonic is proper. It also exerts a soothing effect upon the lungs, and is a valuable auxillary in the treatment of pulmonary consumption.

A teaspoonful of the powdered root may be taken at a dose, and repeated three or four times a day, according to circumstances. Double the dose will prove cathartic.

POPULUS.

Poplar.

Sexual System—Class 20; order 8.

Description.—There are a number of species of the poplar family, differing considerably in their appearance; most of them, however, possessing nearly the same medical properties.

The *populus tremuloides*, or American aspen, sometimes called *quaking aspen*, is, however, the only species much esteemed for its medical products. This is a very beautiful forest tree, growing to a considerable height. The bark on the young tree is smooth, and white. The leaves are cordate, ovate, lanceolate, entire, serrate, of a deep green above, pale underneath, prominently veined, and supported on long slender petioles.

Locality and habits.—The quaking aspen is found in most places throughout the U. States, but is, perhaps, most abundant in the Northern and Middle States. In some places it grows in groups or patches, about springs, and rocky places.

Medical properties and uses.—The inner bark of this tree is a pleasant tasting, and pure, yet powerful bitter tonic. It is useful in all cases of debility, especially in debility of the di-

gestive organs. As an ingredient in tonic cordials. it is invaluable.

Poplar bark sets very agreeably on the stomach, and is therefore generally preferred when the continued use of tonic remedies is required. As the medicine very readily yields its active properties to water, it is unnecessary to use it in substance. A teaspoonful of the fine bark may be scalded in a pint of water, and after sweetening it with white sugar, may be drank through the course of a day.

The inner bark of the tulip tree or yellow poplar (*liriodendron tulipifera*.) is also a very good bitter tonic, but is still more valuable as a prophylactic against worms.

CHELONE GLABRA.

Balmony, Snake-head, Turtle-bloom.

Sexual System—Class 13; order 2.

Description.—Balmony has a perennial fibrous root, which sends up annually a number of erect, smooth, round cornered, square stems, from two to four feet in height, and occasionally branched at the top. The leaves are opposite, lanceolate, acute, entire, serrate, green in the fore part of the season, but becoming speckled with a white mould or dust, early in the fall. The flowers, in some varieties, are white, in others purpleish, and of a very singular shape, somewhat resembling a snake's head with the mouth open. They are disposed in clusters axillary to the leaves, and in terminal racemes.

Locality and habits.—The balmony is an indigenous plant, growing in wettish places, along streams, in meadows and pasture grounds. It is common in most of the States. Its flowering time is in July.

CHELONE GLABRA.



Balmony, Snake-head, Turtle-bloom.

Medical properties and uses.—All physicians agree in considering this article among our purest bitter tonics, and as such may be used in all cases in which articles of this class are indicated. The dose is from 10 to 20 grains of the pulverized leaves. The medicine is considerably used in tonic compounds.

CROTON ELEUTHERIA.

Cascarilla.

Sexual System—Class 19; order 15.

Description.—The shrub that produces the cascarilla bark, it is said, grows from four to twenty feet in height, and is much branched at the top. The leaves are ovate, cordate, lanceolate, elongated towards the apex, entire, bright green above, and stand alternately, on short petioles. The flowers are whitish, and are disposed in axillary and terminal racemes.

Locality and habits.—This shrub is found growing wild in the West Indies, especially in the Bahamas and in Jamaica.

Medical properties and uses.—The cascarilla bark is a very pleasant tasting, aromatic, bitter tonic, and has been substituted for cinchona, but is not quite so efficient as an anti-intermittent as that article. Yet its very agreeable taste and smell make up, to a considerable extent, what it seems to lack in power. Its chief application is in dyspeptic habits, as a general stomachic bitter, and as a tonic in the infirmity of old age and convalescence. This is quite a favorite tonic among the Germans.

Cascarilla is a very important article in compounding bitter tonics, for while it forms a good ingredient as a medicine of this class, its value at the same time is increased by its power of improving the taste and flavor of the compounds into which it enters.

BERBERIS CANADENSIS.

American Barberry.

Sexual System—Class 6; order 1.

Description.—Barberry is a very pretty shrub, rising from four to eight feet in height, with long bending branches, having many dots, and triple thorns. The leaves are crowded, unequal, smooth, glossy, ob-oval, obtuse and serrate. The flowers are slender, either nodding or pendulous, yellow, and rather small. The berries hang in loose bunches, are oblong, red, smaller and less juicy than the *berberis vulgaris* or English barberry. The filaments possess a remarkable degree of irritability, for on being touched near the base, a sudden contraction takes place, which may be repeated several times.

It is found from Canada to Virginia, growing on mountains, hills, among rocks, and in barren soils; but is seldom met with in the Western States. The whole shrub is acid; in the berries this acid is very pleasant, but is mixed with some astringency. The bark is bitter, and of a bright yellow color.

Medical properties and uses.—The bark of the barberry is an excellent bitter tonic, and although somewhat astringent, is also laxative, and in large doses even cathartic, producing copious discharges without pain. In no case is it found to produce watery discharges, or to irritate and debilitate the bowels; but on the contrary, is almost a specific in chronic diarrhœa, dysentery, and bilious fevers. It is one of our best remedies in liver complaints, attended with dyspepsia and habitual costiveness. The berries are antiseptic, acid, sub-astringent and refrigerant. They have been strongly recommended in putrid fevers.

CINCHONA.

Peruvian Bark.

Sexual System—Class 5; order 1.

Description.—The barks brought to us under the name of cinchona, are the products of many different species of the large cinchonaceæ family. It is said that the barks of all the cinchonas which have hairy and woolly blossoms, possess anti-intermittent properties.

The most prominent species are the *C. Condaminea*, *C. Micrantha*, *C. Lancifolia*, *C. Cordifolia*, and the *C. Magnifolia*. The first of these is a tree, which, when full grown, has a stem about 18 feet high, and a foot in thickness, with opposite branches, the lower ones of which are horizontal, and the upper ones elevated or inclined upwards at their ends. The bark on the trunk is ash gray, with fissures; that on the small branches is greenish, smooth, glossy, and admits of easy separation from the wood. The leaves, though of various shapes, are generally ovate, lanceolate, perhaps four inches in length, about two or less in width, smooth, and scrobiculate or pitted at the junction of the veins beneath. The flowers are disposed in axillary, corymbose, and downy panicles.

The second is quite a large tree, attaining the height of some 40 feet, with a proportional thickness. Its leaves are from four to twelve inches in length, by from two to six in breadth, somewhat pointed, smooth, shining on the upper surface, and pitted at the axils of the veins beneath. The flowers, if we except the *C. Lancifolia*, are smaller than those of any other species: they are situated in terminal, loose, and leafless panicles.

The third or *C. Lancifolia*, is a beautiful tree, from 30 to 40 feet in height, with a trunk from one to four feet in diameter.

Its leaves are oblong, lanceolate, very acute at both ends, revolute at the edges, smooth above, and not pitted. The flowers are situated in five-blossomed axillary cymes, and are the smallest of any in the family or genus.

The fourth or *C. Cordifolia*, is a small spreading tree, from 15 to 20 feet in height, having a body of proportional thickness, which is covered with a smooth bark, of a greyish color. The leaves vary much in shape, but are mostly roundish-ovate,

heart-shaped, and about nine inches long. They are smooth and shining on the upper surface, and ribbed and pubescent below. The flowers are in dense, brachitate, downy panicles.

The fifth or last named species, is a stately tree, with very large, oblong, ribbed leaves; smooth, and shining on both surfaces, and often 10 inches or a foot in length. The flowers are in large, terminal, leafless thryses, and have a fragrant odour.

Locality and habits.—The cinchonas are natives of South America, abounding in the Republics of New Grenada, Ecuador, Peru, and Bolivia. They seem to delight in mountainous places, being principally found on the Andes, at an elevation of from 1200 to 10,000 feet.

Medical properties and uses.—The peruvian bark is a very powerful tonic, and is also somewhat astringent, and antiseptic. In its operation, it evinces a singular power of overcoming diseases characterized by periodicity of action, and hence it is particularly adapted to the treatment of intermittent and remittent fevers.

As a remedy in agues, the yellow bark is entirely the best, and next to this, the red; the pale variety being much inferior in its anti-intermittent properties.

Peruvian bark is not only useful in cases of intermittents and remittents, but is serviceable in all other cases in which active tonics are indicated.

The dose of the bark is necessarily large, and hence physicians have labored, and successfully too, to make preparations of it that may be equally effectual in smaller doses. The extract of cinchona, in efficacy, is equal to the bark, and may be used successfully in much smaller doses. The sulphate of quinine, however, has in a manner superseded the use of both the bark and the extract, but its effects are not quite so certain, and from its comparatively high price is apt to be adulterated.

The dose of the pulverized peruvian bark is 20 to 40 grains, taken three times a day; that of the extract is from 10 to 20; and that of the sulphate of quinine is from 5 to 10 or more. These doses are to be repeated two, three, or four times a day, as the circumstances may indicate.

SABBATIA ANGULARIS.

American Centaury.

Sexual System—Class 17; order 3.

Description.—This is an annual or biennial herbaceous plant. It has a fibrous root, an erect, smooth, square stem, with branches above, and rising to the height of one or two feet. Leaves ovate, acute, entire, smooth, opposite, sessile, and embrace half the circumference of the stem at their base. The flowers are numerous, purplish red, growing on the ends of the branches, and altogether forming a large terminal corymb.

Locality and habits.—Centaury is found in the Middle and Southern States, usually preferring low meadow ground, but sometimes growing in uplands, in woods and old fields.

Medical properties and uses.—Centaury is ranked among our most valuable tonics. It likewise possesses considerable anthelmintic properties. It may be used in dyspepsia and in all cases where medicine is needed to promote the appetite and invigorate and strengthen the general system.

The medicine has long been esteemed of value in intermittent fevers. The usual form of its preparation for that purpose, is that of bitters prepared in liquor. It may also be employed in the form of infusion, or in powder.

The dose of the powder is a teaspoonful in some appropriate vehicle.

HELONIAS DICECIA.

Star root, Unicorn.

Sexual System—Class 6; order 3.

Description.—Root perennial, oblong, irregular, terminating abruptly, of a dirty white color, and beset with many small fibres. Leaves radical, lanceolate, procumbent, and of a pale green color. Stem from eight to sixteen inches in height, erect, and terminating in a spike of white flowers.

Locality and habits.—The star root is found in most parts of the United States, growing in sandy plains, on hill-sides, in open woods, and in meadows.

Medical properties and uses.—The root of this article is possessed of tonic, nervine, and expectorant properties. It is particularly serviceable in female weakness. This article is very much esteemed by some as a tonic and by others as a nervine. It enters as a valuable ingredient into the compound called *woman's friend*. The dose of the pulverized root is from ten to twenty grains.

ASTROLOCHIA SERPENTARIA.

Snake root, Little black snake root, Virginia snake root.

Sexual System—Class 18; order 6.

Description.—The Virginia snake root has a perennial, knotty root, beset with numerous long, slender, whitish, fibres. Stem crooked, round, slender, jointed, and from six to twelve inches in height. Leaves from three to seven in

number, alternate, cordate at the base, lanceolate, entire, smooth, and veined. Flowers nearly radical, solitary, and purplish. Capsule oboval, with six angles, and six cells.—Seeds minute, and many.

ASTROLOCHIA SERPENTARIA.



Snake root, Little black snake root, Virginia snake root.

Locality and habits.—There are few parts in the United States, where the Virginia snake root may not be found. It delights in mountainous countries, and is chiefly found in open woodlands.

Medical properties and uses.—Most authors on materia medica, agree in considering this article an active tonic, diaphoretic, antiseptic, and emmenagogue. The root may be used

in fevers, especially in intermittents and remittents. It is also good in rheumatism, gout, dyspepsia, general debility, &c. It is generally taken in tincture or bitters, but may be taken in substance, infusion, or pills. The latter form, perhaps, is preferable, as its exceedingly bitter taste is thereby avoided. The dose of the substance is ten grains.

MENISPERMUM CANADENSE.



Yellow parilla, Moonseed.

Sexual System—Class 20; order 13.

Description.—The yellow parilla is an indigenous, perennial plant. Its root is woody, round, horizontal, of a beautiful yellow color, with few fibres, very long, and generally about the thickness of a pipestem, but sometimes of the thickness of

a finger. Stem a climbing vine, slender, smooth, winding, and of a brown color. The leaves are peltate, cordate, entire, roundish, smooth, and somewhat resembling the leaf of the maple tree.

Locality and habits.—Rich hill-sides, banks of streams, and hedges, are the places and situations, usually preferred by this plant. It is very common in the Western States.

Medical properties and uses.—This is an excellent laxative bitter tonic, and is very useful in the treatment of dyspepsia, habitual costiveness, liver affections, diseases of the skin, syphilis, and in all cases of debility, attended with habitual torpor of the peristaltic motion.

As a bitters to be used during convalescence from the ague and fever, this is an invaluable article.

The root should be well dried, and then broken up in a mortar, when it will be ready to be prepared, either by infusion, or by putting it into wine. When thus prepared, it is to be drank freely without any particular reference to quantity.

PRUNUS VIRGINIANA.

Wild Cherry.

Sexual System—Class 12; order 1.

This is a forest tree, indigenous to this country, and too common to need description.

Medical properties and uses.—The inner bark of the wild cherry has a very pleasant bitter taste. It is a good tonic, laxative, nervine, and annodyne. As a strengthening and healing medicine to the lungs, there is, perhaps, not a better article in the materia medica. The medicine has, in the hands of the writer, given general satisfaction in the treatment of pectoral diseases. In pulmonary consumption, where there is much debility of the system, and irritability of the lungs, this article will be of special service. The medi-

cine may be taken in substance, in teaspoonful doses, but the extract is better, and much more convenient; the dose of this is from 5 to 10 grains. When taken by infusion, a tablespoonful of the fine bark may be scalded in a pint of water, and taken in wineglassful doses, three times a day.

BITTER ASH, (*Euonymus Atropurpureus*.)—The root of this shrub is intensely bitter, and is a very good tonic, and laxative. Its application is in such cases as were pointed out for other articles of this class. By some, it is considered equal to the dog-wood as an anti-intermittent, and febrifuge.

WILD HOARHOUND, (*Eupatorium Teucrifolium*.)—This is a valuable tonic, and is much used by Southern planters.

HOPS, (*Humulis Lupulis*.)—The polen or yellow dust of the hop, is an invaluable tonic, in intermittent and remittent fevers, as well as in other cases where articles of this kind are required.

GOLD THREAD, (*Coptis Trifolia*.)—The root of this plant is a pure and very bitter tonic; useful in dyspepsia, and all cases of debility.

VERVAIN, (*Verbina Hastata*.)—Both the blue and white vervain are good tonics, and are much used in some parts of the country, in the treatment of fever and ague. The tops and roots are used in a strong decoction.

PEACH MEATS.—The meats of the peach stone, are highly recommended as a medicine in cases of weak digestion. Dr. Thomson regarded them as being peculiarly beneficial to the stomach and bowels.

CAMOMILE, (*Anthemis Nobilis*.)—Camomile is a very popular tonic, and is much used in domestic practice. Besides its tonic properties, it is also used by some as an anthelmintic.

III. ASTRINGENTS.

Astringents are commonly defined to be substances that contract or condense and support the tissues of the body.—When taken into the mouth, they produce a marked sensation of roughness or puckering of the lips, tongue, and palate.

The usefulness of this class of medical agents, has, in general, been too much overlooked by medical authors and practitioners. Astringents have usually only been considered with reference to their immediate and independent effects on

the substance of the organs. But it is not unreasonable to suppose that these agents, like some others, may in their effects, sustain certain specific, harmonious relations with the vital laws, so as to promote the conservative powers in a manner entirely independent of their superficial and most obvious impressions on the economy. A part may become diseased,—take on inflammation, and soon manifest signs of gangrene; if now an application of some active astringent be made, the morbid cause will be suspended, and the part recover. Now here was an agency evinced entirely different from the power of mere contraction. If astringents are given in combination with stimulants, the latter are rendered much more permanent in their effects. Hemorrhages are sometimes instantly arrested in distant parts, by the simple introduction of some active astringent into the stomach. In this case it cannot reasonably be supposed that the effect was produced by the direct influence of the medicine on the hemorrhagic parts.

The accoucher of the Reformed system, well knows the singular power that some of our astringent articles possess over the irritated uterus. A single dose of these, sometimes, stops untimely pains that may have harrassed the patient for several days.

In view of these facts, it must be admitted that astringents possess a peculiar curative power that is manifested, not only in their local effects, but in their influence on the general system.

The *local* and *immediate* effects of astringents, are also somewhat remarkable: in gonorrhœa, leucorrhœa, and diarrhœa, a strong infusion locally administered, will, if persevered in, seldom fail of giving relief.

The singular promptness of these medicines in arresting hemorrhages, when locally applied, entitles them to the name of *styptics*.

In cases of unhealthy secretions, and morbid accumulation on mucous surfaces, and especially those of the alimentary canal, astringents are almost indispensable. They cause a contraction of the tissues, and thus disengage the comparatively inelastic, morbid, coating, which is thus discharged, sometimes in large pieces, commonly called false membrane or canker.

Prolapsus and excessive relaxations also imperiously demand the use of astringent medicines.

As a general tonic and restorative, astringents are of great value. They seem to render the animal tissues more firm and capable of resisting morbid influences. But their use

as tonics is not always indicated when medicines of a restorative or toning character may be serviceable. For this purpose the *bitter tonics* are more generally applicable.

Astringent vegetables do not all necessarily produce constipation. Many articles of this class may be used internally for a long time without materially affecting the bowels in this way. Moreover, there are astringent articles that are considerably laxative in their effects; and some, such as rhubarb, are, indeed, commonly used as cathartics.

Special Astringents.

GERANIUM MACULATUM.

Cranesbill, Crowfoot geranium.

Sexual System—Class 15; order 10.

Description.—The cranesbill has an irregular, knotty, contorted, pitted, brownish, perennial root, with few fibres. The stem is erect, round, pubescent, about a foot or more in height and with few branches. The leaves are palmate or deeply divided into from five to seven lobes, which are rough, hairy, variously incised at their extremities; the lower ones supported on long radical petioles that are purplish at their base; and the upper ones opposite and smaller. The flowers are purplish, with five petals, and are supported on peduncles arising from the joints of the stem, and bearing each two flowers on short pedicels. The pistil of the flowers is very long and projecting, like a cranes bill,—whence the vulgar name of the plant.

Locality and habits.—This is a very common plant, found throughout this country, especially in the Western States.

Medical properties and uses.—The root of the cranesbill is one of the most pure and powerful astringents, and styptics that we possess. Being easily procured, and not objectiona-

ble on account of any unpleasant taste, or other offensive properties, it is likely still to improve in popularity as an astringent, although it is already in great favor as such. The medicine is particularly useful in hemorrhages, prolapsus, diabetes, diarrhœa, and, after the bowels are well cleansed, in dysentery. The decoction of this article is also very good as a wash in aphtheous sore mouth, and as such in the treatment of old sores, cancers, &c. The decoction is made by boiling an ounce of the coarsely powdered root in a pint of water,—letting it settle, and pouring off the tea. For internal use this is taken in wineglassful doses once an hour, or as the circumstances may indicate. When the medicine is taken in substance, a teaspoonful is considered a dose.

MYRICA CERIFERA.

Bayberry, Wax-myrtle.

Sexual System—Class 20; order 4.

Description.—Bayberry is a shrub growing from two to twelve feet in height. The stem is much branched, and has a greyish bark. The leaves are narrow and tapering at the base, lanceolate at the other end, and slightly toothed toward the point. They are somewhat disposed to twist; are of a deep shining green on their upper surface, and stand alternately and somewhat crowded on the ends of the small branches. The flowers are of a greenish-purple. The fruit is a globular naked berry, single, or in clusters around the branches. When these are boiled, a greenish-white wax is obtained, which is used for various purposes, as for candles, salves, and plasters.

Locality and habits.—The bayberry bush is found all along the Atlantic Coast, from New England to Louisiana. It generally grows largest in the south. It flowers in May.

MYRICA CERIFERA.



Bayberry, Wax-myrtle.

Medical properties and uses.—Bayberry is an invaluable stimulating astringent. When an infusion of the medicine is taken into the mouth, it produces quite a pungent and astringent sensation, with a flow of saliva. When swallowed it occasions a sense of warmth but by no means unpleasant feeling in the stomach.

Few, and perhaps none of our astringents have a more extensive application than bayberry. In all cases where it is wished to produce an exciting and bracing effect in the system, this will be our best article. In the exhibition of its curative powers, the medicine, instead of producing its effects at the expense of the tonic power of the system, will, indeed, add vigor to the very organs on which it spends its influence.

Bayberry is highly valuable in cases of dysentery, cholera morbus, and all other excessive evacuations. An infusion of bayberry forms an excellent drink to be taken before and during the operation of an emetic. It prepares the general system, and especially the stomach for its easy, safe, and effectual operation. When compounded with some appropriate laxative, it forms an excellent preparation to be used in the treatment of strumous habits. The decoction makes a very good wash in the treatment of cancers, and ulcers: in the fistulous ulcer, it should be injected by means of a proper syringe.

Cranesbill has not been placed before this article in the present class of agents, because it is a more valuable medicine, but simply because it is a purer astringent,—bayberry being also stimulant. It is in view of its conjoined stimulating and tonic properties, that the bayberry is, by many physicians, combined with diaphoretic compounds.

The dose of the pulverized bark of the root of bayberry is a teaspoonful, repeated as circumstances may require. The strong infusion is taken in half teacupful doses.

NYMPHÆ ODORATA.

White Pond Lily.

Sexual System—Class 12; order 1.

Description.—The root of this plant is perennial, two or three inches in diameter, several feet in length, beset with fibres, fleshy, round, light colored within, darker without, and

somewhat knotty. The leaves are large, round, peltate, cleft to the stem, entire, smooth, glossy, green above, reddish white below, and stand on long radical petioles. The flowers are large and white; they open to the sun in the morning and close in the evening. They are supported on long stems rising from the root.

NYMPHÆ ODORATA.



White Pond Lily.

Locality and habits.—This beautiful plant is found in many parts of the U. States, growing in ponds and marshes. In some of these places it grows very plentifully. Occasionally large mats or patches of it, are found floating in the water,—the roots being loosely surrounded by a collection of decayed vegetation, or light mud.

Medical properties and uses.—The root of the white pond lily is a very pure and inoffensive astringent. It is not apt to disagree with the stomach or taste, and hence is very convenient for use among children.

This article, though equally serviceable in all cases in which medicines of this kind are indicated, has its special use in the form of a poultice for delicate parts that may require astringent applications, as for a wash in aphthæ a drink, for bowel complaints in children,—enemas in dysentery, and injections in prolapsus, and gonorrhœa. The usual form of its internal use is by infusion, taken freely.

TRILLIUM.

Beth Root, Wild Lily.

Sexual System—Class 6; order 3.

Description.—There are many species of the trillium, most of which are medicinal. The white, red, and purple flowered varieties, are, however, mostly used.

The root of these plants is perennial, bulbous, oblong, wrinkled, with fibres, about an inch in diameter, and about two inches in length. The stem is simple, upright, round, smooth, green, from eight to twelve inches or more in height, and surmounted with three broad, obtuse-accuminate leaves, about the size of a dollar. The flowers of the different species, differ somewhat in their color, size, and position; some are white, some red, some purple, and others mixed. In all the species, the flowers arise from the fork of the stem, between the leaves; in some they are erect, in others pendulous or nodding.

Locality and habits.—The trillium genus of plants is peculiar to North America. Some of the species are most common in mountainous countries, and others in rich bottoms. Some of the varieties of most species are found in the majority of the States.

Medical properties and uses.—The beth roots are astringent, styptic, tonic, antiseptic, detergent, and somewhat expectorant. As an astringent, most of these plants are excellent in hemorrhagic affections, and fluxes. The Indians considered that the purple flowered varieties, were best in all sanguineous effusions, especially bleeding from the lungs,—that the red flowered varieties, were best in menorrhagia, and the white flowered in leucorrhœa.

Although these plants have but recently been introduced into notice as medicines, yet the experience of very many of our practitioners fully testifies to their superior merits. Aside from their utility in hemorrhages, they are of considerable value in pectoral diseases. As an external application, in the form of a poultice, the fine root is superior to almost any thing else in foul ulcers, gangrene, carbuncles, &c. Professor Raffinesque considered the beth roots, combined with blood-root, certain remedies, if preceded with a cathartic, in cases of carbuncles and ulcers. The dose of the pulverized root is a teaspoonful. When taken in infusion a table spoonful of the fine root is scalded in a pint of water and drank freely.

HAMAMELIS VIRGINICA.

Witch Hazel.

Sexual System—Class 4; order 1.

Description.—This is an indigenous shrub, growing from six to fifteen feet in height. The leaves are entire, ob-ovate, obtusely toothed, and cordate, with a small sinus; they are of a deep green color when they first put out, but soon fade, assuming a yellow appearance. The flowers are yellow, and appear in the winter; but the fruit, which consists of a capsule

containing two oblong black seeds, does not ripen until the following summer.

Locality and habits.—The witch-hazel is found in nearly every section of this country, usually growing in elevated and stony places—sometimes on the margin of swamps and along streams.

Medical properties and uses.—This is one of our most valuable astringents; it is also styptic, tonic, and antiseptic. As an astringent, it is valuable in all cases where this class of medicines is indicated. The infusion may be employed with great advantage in hemorrhages from the stomach, or lungs; and in the form of an injection will usually afford relief in cases of irritable piles, and in bowel complaints generally. It also forms an excellent medicine for uterine hemorrhages, bearing down pains, flour albus, &c. In these cases it should be applied to the parts implicated, by the use of a syringe.

The decoction forms a useful wash for inflammatory affections of the eyes, for old sores, &c., and in this form, or in the form of a poultice, is an excellent application for external piles. The leaves are the part generally used.

RHUS GLABRUM.

Sumach.

Sexual System—Class 5; order 3.

Description—Sumach is a shrub growing from four to twelve feet high, with a stem generally crooked, having irregular branches, and covered with a light gray bark. The leaves are pinnate, green on the upper surface—lighter beneath—lanceolate, acutely toothed, acuminate and glabrous. In the latter part of the season they become of a fiery red color. The flowers are greenish red, and are arranged in erect, terminal thyrses, forming a conical bunch, as large as a man's fist. These are followed by clusters of small red berries, covered with a delicate down, of an agreeable acid taste.

Locality and habits.—This shrub is found in all the Northern, Middle, and in some of the Western State, growing in hilly places, in waste fields, along fences, &c.

Medical properties and uses.—The bark, leaves, and powder which covers the berries, possess valuable astringent, tonic, detergent, and diuretic properties. The decoction forms an excellent wash for ulcers and old sores; it also forms a valuable gargle in mercurial sore mouth, sore throat, &c.; and may be used with great advantage as an application in tetter and many cutaneous diseases. Taken internally it produces a tonic effect upon the skin, and may be employed with advantage when that organ is in a relaxed and debilitated condition. It may also be used with advantage in stranguary, and in bowel complaints. The bark of the root is esteemed of value as an antiseptic; and, made into a poultice, is almost unequalled as a remedy for old ulcers.

RUBUS STRIGOSUS.

Red Raspberry.

Sexual System—Class 11; order 13.

Description.—This is a bushy, perennial shrub, with slender, upright stems, which have a reddish bark, beset with numerous stiff bristles or spires. The leaves are rough, lanceolate, acuminate, serrate, with deep lateral notches, green above, and white beneath. The flowers are white, and disposed in clusters. The fruit is red when ripe, of a conical shape, granular, and edible.

Locality and habits.—This plant is found in most of the States, growing in waste lands, and in stony places—frequently among rocks on the sides and summits of mountains.

RUBUS STRIGOSUS.

*Red Raspberry.*

Medical properties and uses.—The leaves of the red raspberry form a mild and agreeable astringent, possessing slightly tonic properties, and a pleasant aromatic taste. It forms an excellent medicine in the treatment of bowel complaints of children. In such cases it may be given in decoction, per stomach, or by injection. It is also valuable as a medicine to be used in connection with capsicum and sculcap, or lady's slipper, for the purpose of regulating labor pains. Dr.

Thomson recommends a tea of this to be given occasionally to very young children. He says it will prevent the sore mouth to which they are liable. It also constitutes a soothing and cleansing wash for burns, sores, and irritated surfaces.

Among the particular indications for its use, are the calls for astringent applications in parts where mild, unirritating and pure medicines alone are admissable, as in the eye, inflamed sores, &c.

STATICE LIMONIUM.

Marsh Rosemary.

Sexual System—Class 5; order 5.

Description.—Root perennial, fleshy, and branched. The flower stem is round, smooth, upright, about a foot in height, and considerably branched at the top. The leaves are radical or standing on long radical petioles; they are obovate, cuneiform, obtuse at the outer ends, acuminate, entire, flat and shining on their margins, somewhat thick and firm. The flowers are numerous, small, bluish-purple, and arranged on the upper sides of the terminal branches.

Locality and habits.—Marsh rosemary is principally found along the sea coast from New England to Florida. It flowers in August and September.

Medical properties and uses.—The root of this plant is a very powerful astringent, antiseptic, and styptic. The medicine, however, is not much used as an internal remedy, as it is considered to have a tendency to produce constipation of the bowels. As an external application, in the form of a poultice, to inveterate ulcers, cancers &c. it is very highly esteemed. The decoction is also much valued as a gargle and wash in sore mouth or aphthea, and sore throat. Dr. Mattson also recommends an ointment made of the root for the cure of piles.

STATICE LIMONIUM.

*Marsh Rosemary.*

EVAN ROOT, (*Geum Rivale*.)—The root of this article, which is sometimes called chocolate root and water evans, is a gentle astringent, and is much used in domestic practice, in the form of a strong decoction, for bowel complaints among children.

DEWBERRY, (*Rubus Trivialis*.)--BLACKBERRY, (*Rubus Villosus*.) The bark of the root of both these species of the rubus is powerfully astringent, and as such, is much used in dysentery and diarrhœa, after the bowels are well cleansed by the proper means.

MATICO, (*Piper Angustifolium*.)—This plant is a native of Peru; the flowering tops and leaves are brought to us, and are to be got in the shops.

The matico is astringent, and powerfully styptic. The pulverized leaves and flowers should be applied to the bleeding parts; or a strong decoction may be made of them, and the parts washed with it. The decoction is also good in uterine and all other hemorrhages, as well as bloody flux. It will also be found useful in gonorrhœa and leucorrhœa.

HEMLOCK SPRUCE, (*Pinus Canadensis*.)—The inner bark of this tree is an active astringent, and is much used as such in some parts of this country. Some are in the habit of combining this article, as well as many other astringents, (especially bayberry,) with the stimulants, for the purpose of rendering the latter more permanent. The hemlock bark is used in all cases in which articles of the astringent class are indicated. The infusion is generally preferred. This is to be taken freely, that is, without any particular reference to quantity.

VI. EUTROPHICS OR ALTERATIVES.

These are medicines that are calculated to obviate morbid conditions of the body without necessarily producing any material increase of the evacuations.

Alteratives are supposed to effect chiefly the functions of nutrition and absorption, and that they so modify or change these important phenomena as to produce a new action,—one contrary to that which contributed to the disease.

These agents are chiefly intended for chronic diseases, especially such as scrofula, white-swelling, consumption, syphilis, and the various cutaneous diseases.

It may be observed that although an evacuant power is not necessary to the specific operation of eutrophics, yet this is by

no means a hindrance to them. A medicine, therefore, whose operation is followed with a marked improvement of health, although proving slightly laxative, will nevertheless be considered an alterative, when it will appear that the laxative effect could not have been the cause of the improvement.

Special Eutrophics.

SARSAPARILLA.

Sexual System—Class 20; order 6.

There are many different articles used in medical practice under the name of *Sarsaparilla*, and in many instances, perhaps the majority, articles possessing none of the properties of the true *Sarsaparilla* are administered for this drug. These circumstances could not do otherwise than bring the *Sarsaparilla* more or less into disrepute; and yet there is but little doubt but that the genuine medicine possesses alterative properties of no mean character. The most of the *Sarsaparilla* of commerce is produced by the *smilax* genus of plants. But it is not yet certainly known what species of *smilax* it is that produces the genuine or best article. It has been supposed that the *smilax Sarsaparilla* of the U. States is identical with the *smilax* of Honduras, which produces the best *Sarsaparilla* that is brought to us.

The *smilax Sarsaparilla* has a long slender stem or vine, which is somewhat angular and beset with prickles. The leaves are alternate, unarmed, ovate, lanceolate, nerved, glaucous beneath, and supported with footstalks accompanied with long tendrils. The flowers are disposed in bunches of three or four on a common peduncle, which is longer than the petioles of the leaves. This plant is usually found growing in swamps and hedges, through the Middle and Southern States.

The Honduras *Sarsaparilla* is brought to us directly from the Bay of Honduras, and comes in bundles two or three feet in length, which are composed of a number of roots folded lengthwise and wound or tied around in the middle, to secure

it, with a long piece of the root. These bunches are packed in large bales, covered with skins. The thickness of these roots is about that of a pipe stem, and the color of the bark is of a reddish-gray.

Much of this Sarsaparilla is brought to us from Jamaica, whither it is brought from Honduras. This that comes by this rout is generally called Jamaica Sarsaparilla.

There are still other varieties of Sarsaparilla that are brought to us from different countries, which generally bear the names of the ports or countries from whence they are brought: thus we have the Brazilian, Lima, Caraccas, Peruvian, Vera Cruz, and Mexican Sarsaparillas.

Medical properties and uses.—The Sarsaparilla root has for many years been considered among the best alteratives that we possess. It is particularly useful in syphilis, strumous habits, tubercular consumption, &c. When the medicine is prepared for use, it should not be much boiled, but may be broken up fine, and then be simmered for a few hours in water at a moderate heat; or it may be reduced to a fine powder, and then digested for three or four days in warm water. This is then to be taken freely. The extract of Sarsaparilla that is found in the shops is not, generally, worth much.

When Sarsaparilla is selected for use, that should be taken that has the strongest odour.

RUMEX CRISPUS.

Narrow-leaved Dock.

Sexual System—Class 6; order 3.

Description.—Root perennial, large, fleshy, branched, spindle-shaped, and of a yellow color. Leaves many, radical, large, lanceolate, entire, crisped, and are supported on long grooved petioles. The stem is upright, smooth, furrowed, with a few bracts as it ascends, and branched at the top. The terminal branches are beset with many small flowers, which are followed with numerous small three sided seeds.

Locality and habits.—This is an extremely common indigenous plant, growing about door-yards, in meadows, along fences, and in lanes. It flowers in July.

Medical properties and uses.—This and nearly all the other docks, especially the broad-leaved, and the bur docks are good alteratives, tonics, and detergents.

These plants are excellent eutrophics, and as such, may be used with advantage in all scrofulous, strumous, scorbutic, and scirrhus affections. They are particularly useful in cases of chronic diseases of the skin that are dependant on a vitiated state of the humors.

ARALIA NUDICAULIS.

False Sarsaparilla.

Sexual System—Class 5; order 5.

Description.—This is a common plant in the western country, and is much used under the name of sarsaparilla. It has a long, horizontal, perennial root, of about the thickness of a pipe stem, with a grayish bark. The stem is upright, round, smooth, about a foot or more in height, and divided on the top into three petioles, bearing as many quinate, or thrice ternate leaves. The leaflets of these are oblong-oval, acuminate, rounded at the base, smooth on both sides, and serrate. The scape or flower stem is naked, shorter than the leaf, and terminated by three umbels with numerous yellowish-green flowers, followed by small round berries.

Locality and habits.—This plant is found on uplands or hilly grounds, growing in woods, new-grounds, &c. It is found in most of the Western States.

Medical properties and uses.—The false sarsaparilla is used for the same purposes of the genuine sarsaparilla, only it is not so good, and must be taken in larger quantities. It is

generally taken in decoction, or infusion, and drank in portions as large as the stomach will bear.

ARALIA RACEMOSA.



Spikenard.

Sexual System—Class 5; order 5.

Description.—The spikenard is a beautiful luxuriant plant, with long, perennial, horizontal, spindle-shaped, and branched roots, which have a grayish bark. The stem is round, smooth, branched, and of a purplish-green color. The leaves are large, compound or thrice ternate, with oblong-oval, lanceolate, acuminate, smooth, entire, serrated leaflets. The flowers are arranged in umbels; they are followed with round, purple or dark berries.

Locality and Habits.—Spikenard delights in a rich soil, and

is found in ravines, along fences, in the woods, and often selects piles of vegetable mould, as the remains of logs or timbers. It grows in most of the States.

Medical properties and uses.—Besides its general application where alteratives are indicated, it seems, according to the opinion of some, to be particularly serviceable in pectoral or lung affections, and female weakness. The green root forms an excellent poultice.

CELASTRUS SCANDENS.*

Staff Vine, False Bitter-Sweet,

Sexual System—Class 5; order 1.

Description.—Root woody, long, with a thick fleshy bark, and beautiful yellow cuticle. The stem is a long vine, with a rough bark, which has a grayish cuticle, but yellow derm. The vine is generally supported by bushes, and trees, around which it binds, sometimes, so tightly as to burry itself in the solid wood. It is much branched at the top, and bears, in the fall, numerous clusters of beautiful orange colored, oblong berries.

Locality and habits.—This singular plant is found most plentifully in the rich Western bottoms.

Medical properties and uses.—The bark of the root of this plant, is considerably alterative in its effects. It is chiefly used in decoction or infusion, for chronic cutaneous affections. In order to insure its good effects, its use must be persevered in. In some medical books this article is recommended in the form of an ointment, for scrofulous tumors, and other obstinate swellings. But this credit was gained by it from the popularity of the real bitter-sweet, for which it has been mistaken, as already remarked.

*This plant, though entirely dissimilar, is often confounded with the *solanum dulcamara*, or Woody night-shade.

CELASTRUS SCANDENS.



Staff Vine, False Bitter-Sweet.

SILPHIUM PERFOLIATUM.

*Cup Plant, Ragged-cup.*

SILPHIUM PERFOLIATUM.

Cup Plant, Ragged-cup.

Sexual System—Class 17; order 4.

Description.—Root perennial, long, crooked, pitted, jointed, with fibres issuing from the joints. Stem upright, square, about an inch in diameter, branched at the top, and from two to six feet in height. The leaves are large, ragged, clasping or cupped, opposite, and diminishing in size as they ascend up the stem. The flowers are terminal, with a broad disk, and beautiful, yellow, spreading petals.

Locality and habits.—The cup-plant is found in the rich bottoms of our western rivers. In some places it grows very plentifully.

Medical properties and uses.—The root of this beautiful plant, when taken into the mouth, has a strong scratching or acrid taste, which is very durable in its effects. It excites the secretions, and operates as a general deobstruent. Its effects are also prominently eutrophic, and detergent. In all chronic visceral affections, this article will prove itself a valuable remedy. As a diaphoretic it is not inferior, and hence the medicine is particularly serviceable in visceral inflammations, such as chronic hepatitis and chronic inflammation of the spleen. It is prepared in strong decoction, and taken in half tea-cupful doses, according to the symptoms.

ALNUS SERRULATA.

Black Alder, Tag Alder.

Sexual System—Class 19; order 4.

Description.—This is a shrubby tree or bush, rising from five to fifteen feet in height. It is much branched at the top, and has a grayish bark. The leaves are large, roundish, or oblong, acuminate, and serrate. The flowers are in aments or tags, like those of the hazel, and appear in autumn.

Locality and habits.—The black alder is found in wet lands, along brooks, and in swampy places. It grows in bunches, that is, there are generally a number of stems, say from six to several dozen to a root.

Medical properties and uses.—The bark of the root, the tags, and boughs, are good alteratives, and detergents. The medicine is generally used in diseases of the skin. It is prepared in strong decoction, and taken freely. The decoction makes a good wash for old foul ulcers.

GUIACUM.—The shavings, or gum of guiacum are actively alterative, and may be used in all cases in which articles of this class are indicated, especially in chronic diseases.

VII. ANTISEPTICS AND DISINFECTANTS.

Antiseptics are remedies which have a tendency or power to prevent putrefaction or mortification, or of obviating it when it has already taken place. Disinfectants are agents that are capable of neutralizing morbid and offensive effluvia:—they are also antiseptic in their effects.

Special Antiseptics and Disinfectants.

ACIDUM PYROLYGNEUM.

Pyroligneous Acid, Vinegar of Wood.

This acid is obtained by the destructive distillation of wood. To prepare it, a furnace should be built, and a strong sheet-iron cylinder of any size, with a tight lid, placed in it. To the top of this, an iron tube, about a foot in length, should be fixed: to this there should be fixed a worm of a common still,

or any other suitable tube, long enough to condense the vapor. This worm or tube must pass through a tub or trough of water, to favor the condensation. The apparatus being complete, the cylinder may be filled with some solid dry oak, or any other good dry wood, and the lid carefully luted with clay so as to make the whole air-tight. A good fire may now be raised and continued until the products cease to come over. The products in the vessel, previously prepared to receive it, are an impure pyroligneous acid, which will answer for ordinary external use, but for internal use, and for the preservation of meat, &c., it should be purified by redistillation.

Medical properties and uses.—This is perhaps the most powerful antiseptic that we possess. The article, of moderate strength, needs only be applied two or three times to gangrenous parts to restore them. As a cleansing and healing application in the treatment of ill-conditioned ulcers, cancers, and scrofulous sores, it, perhaps, has no rival. The medicine is applicable in all cases in which a powerful antiseptic, and healing medicine is required.

Any kind of meat may be preserved by dipping it into this acid a few times, and it will neither injure the meat, or spoil its flavor, but rather improve the latter,—at least for some palates.

CARBO LIGNI.

Charcoal.

This is prepared by piling any quantity of good solid wood in a conical heap, and covering it with earth or sod to prevent the free access of air; several holes being left at the bottom, and one at the top, in order to give it some draught, so as to commence the combustion. This being attended to, the wood is then kindled from the bottom. As soon as the fire has fairly started, the hole at the top is closed, and after the fire has pervaded the wood pretty generally, those at the bottom too.

By those means the combustion is carried on by a limited supply of oxygen, and with a smothered flame, and hence

nothing more than the more volatile parts, as the oxygen and hydrogen are dissipated, while the carbon, in the form of *charcoal*, is left behind.

Medical properties and uses.—Charcoal is actively antiseptic, and absorbent. In the form of a poultice with yeast, it is very good to arrest mortification. With the same view it may be taken in large doses, internally, when gangrene of the stomach or bowels is threatened. It is an excellent article, to be used in typhoid fever and dysentery. Meat embedded in fine charcoal is preserved for many months.

CALX CHLORINATA.

Chlorinated Lime, Chloride of Lime.

This is prepared by the manufacturing chemist, by the action of chlorine on hydrate of lime. It may be purchased at the shops much cheaper than it can be made by the practitioner.

Good chlorinated lime is a dry or slightly moist, grayish-white, pulverulent substance, possessing an acrid, bitter, pungent, astringent taste, and a feeble odor, resembling that of chlorine.

Medical property and uses.—Chlorinated lime is perhaps the most powerful disinfectant that we possess. It is of eminent service, to purify the chambers of the sick. For this purpose it is simply to be put in a dish or saucer, which is then to be placed in some convenient situation in the room.

A solution of chlorinated lime makes an excellent wash for foul ulcers, burns, chilblains, and cutaneous eruptions. It makes, when of suitable strength, a very good gargle in cases of putrid sore throat, and sore mouth and gums. The chlorinated lime constitutes the popular *bleaching powder* that is so extensively used.

CHLORINUM.

Chlorine.

As a disinfectant for clothing and infected apartments, chlorine has long been a popular agent. A mixture that will yield chlorine for three or four days, in a quantity sufficient for all ordinary purposes, may be made by mixing intimately one part of *common salt* with one part of *black oxide of manganese*, and after placing this into a shallow earthen dish, pouring on two parts of *sulphuric acid*, previously diluted with two parts by measure of *water*, the mixture being stirred with a stick while it is being made. If the vessel, containing this mixture, is placed in a room that is infected with a poisonous contagion or effluvia it will perfectly purify it: or if clothes are held over the fumes rising from the mixture, or even hung in the room containing it, they will be rendered pure.

Persons using the chlorine, should be careful not to inhale much of it, as it is injurious to the lungs.

It is unnecessary here to notice severally, all the antiseptics that are found among the *tonics*, *astringents*, and *stimulants*.—It must suffice to say that the most active articles in all these classes, as, for instance, cinchona, columbo, hydrastis can., geranium, bayberry, white pond lilly, cayenne pepper, ginger, black pepper, tinc. of myrrh, and even sassafras bark, are all excellent antiseptics. When used, they should be made up with yeast, charcoal, or slippery elm mucilage, and applied to the parts: or, if needed internally, they may be taken down in decoction, infusion, or tincture, in large doses.

CHAP. VII.

Medicines whose effects are prominently chemical.

I. ALKALIES OR ANTACIDS.

These are remedies which are calculated to obviate acidity in the stomach and elsewhere. This they effect by combining with the acid and thus neutralizing it. These agents are not of very extensive application, but in some cases are nevertheless considerably important.

Alkalies are chiefly indicated in the heart-burn attending dyspepsia,—to promote the operation of emetics,—in the treatment of poisoning by the ingestion of the concentrated acids, and in urinary calculi, caused by an excess of uric or some other acid.

Special Antacids.

SODÆ CARBONAS.

Carbonate of Soda.

Carbonate of soda is obtained by the manufacturing chemist, from the ashes of the Chenopodiaceæ and Algaceæ families of plants. It is also found in certain parts in Egypt, Hungary, and South America, occurring in a native state.

The carbonate of soda, as it occurs in the shops, is in opaque, porous masses, of a white color, and made up of numerous, aggregate, chrystalline grains.

The bicarbonate of soda is now rather more in use than the carbonate. It is preferred because it is more pure, and is more pleasant to the taste, as well as the stomach.

Medical properties and uses.—Either of these preparations of soda may be taken in from a half to a whole teaspoonful doses, dissolved in water. A dose of it may occasionally be taken in cases of heartburn, acid eructations, and all other cases in which alkalies are indicated.

POTASSÆ CARBONAS.

Carbonate of potash, Salæratuſ.

This, like the soda, may be obtained either from the vegetable or mineral kingdoms. Salæratuſ is, however, chiefly prepared from common wood ashes. As found in the shops, it consists of a coarse granular white powder, and has a nauseous, alkaline taste. It is very soluble in water, but is insoluble in alcohol.

Medical properties and uses.—Salæratuſ is a very good alkali but little inferior to carbonate of soda. It may be used in all cases in which the latter is found useful.

CARBONATE OF AMMONIA.—This is an excellent antacid, and is at the same time considerably stimulant and diaphoretic. It is therefore rather better than either soda or salæratuſ, in dyspeptic sour stomachs, as well as in some other cases.

CHAPTER VIII.

Medicines whose action is prominently mechanical.

I. DEMULCENTS AND EMOLLIENTS.

The class of demulcents, by many writers on therapeutics,

is now considered separate from that of emollients;—the former is now made to comprise such agents as are capable of shielding sensible surfaces from the action of acrid matter, by covering or coating them with a viscid and soft material; whilst the latter embraces articles that not only effect this, but at the same time, so insinuate themselves into the textures, as to render the parts more lax and flexible by their relaxing power. These agents will, however, here be considered together.

They are particularly serviceable in irritation and inflammation of the mucous membrane of the stomach, bowels, and urinary passages; as well as externally in chafes, burns, bruises, and irritable wounds. They should be used in large and frequent doses, for as they chiefly depend on mechanical principles for their action, this end is sometimes prevented by the digestive process—changing the character of the agent—when it is taken in small portions.

Special Demulcents and Emollients.

ULMUS FULVA.

Slippery Elm.

Sexual System—Class 5; order 2.

This is a very common forest tree, and needs no description.

Medical properties and uses.—The mucilage of the slippery elm bark is one of the best demulcents that we possess; and as it is easily procured and pleasant to take, it is very extensively used in medical practice. It may be used with the certain prospect of benefit in all cases in which demulcents are indicated. It is particularly serviceable in inflammation of the mucous surface of the alimentary canal, and in the form of a poultice or cataplasm, in cases of burns, chafes, irritable ulcers, wounds, bruises, and healings.

ACACIA.

Gum Arabic.

Sexual System—Class 15; order 10.

The gum arabic brought to us, is the product of a number of different trees of the leguminose order, growing in Arabia, Upper and Lower Egypt, Hindostan, and other places. As found in the shops, it consists of roundish or amorphous pieces, or irregular masses of various sizes, more or less transparent, hard, brittle, and pulverizeable. Its color is usually of a yellowish white, but frequently presents various shades.

Medical properties and uses.—Gum arabic is an excellent demulcent, and will be found useful in catarrhal affections, and irritation of the mouth and fauces, as well as in inflammation of the stomach, bowels, kidneys, bladder, &c. It also serves as a very good vehicle for taking less pleasant articles.

CONVALLARIA MULTIFLORA.*Solomon's Seal.*

Sexual System—Class 6; order 1.

Description.—Root perennial, horizontal, jointed, white, round, with some fibres. Stem terete, and inclining, or arched. Leaves alternate, clasping, oblong-ovate, lanceolate, and nerved. Flowers white, numerous, and pendulous.

There is another variety of Solomon's Seal that grows more plentifully than this, which, although smaller, is equally valuable.

CONVALLARIA MULTIFLORA.

*Solomon's Seal.*

Locality and habits.—These plants are found in most parts of the U. States, growing in rich soil, in rocky and mountainous countries.

Medical properties and uses.—Solomon's Seal is demulcent and tonic,—boiled in milk, it forms an excellent medicine in the treatment of irritable piles, and inflammatory diseases of the bowels generally. It is also quite serviceable in leucorrhœa, and gonorrhœa. The medicine is beneficially used in

the form of a poultice, in the treatment of inflamed and raw surfaces.—The root is the part used;—dose, as much as the stomach will bear.

FLAX SEED, (*Linum Semina*.)—Flax seed tea is an excellent demulcent, and is particularly serviceable in scalding of the urine.—It is to be taken freely without any particular reference to quantity.

MARSH MALLOWS, (*Althæa Officinalis*.)—The root of this plant may be used with advantage in all cases in which demulcents are required.

OLIVE OIL, (*Oleum Olivæ*.)—Sweet oil is an excellent emollient, and is exceedingly serviceable as a liniment in burns, chafes, and inflamed surfaces generally. It forms an ingredient in many valuable cerates and liniments.

OIL OF ALMONDS, (*Oleum Amygdalæ*.)—This is a good emollient, and may be used as such in all cases in which the sweet oil is found serviceable.

LARD, (*Adeps*.)—Hogs lard is a good emollient and is much used by many physicians instead of sweet oil.

In addition to those already noticed, there are a number of articles that are valuable demulcents, and which are at the same time quite nutritious, but cannot here be treated separately. Among the most important of these are, Arrow root, Tapioca, Sago, Barley, Oatmeal, Iceland Moss, &c. These are all good in cases of inflammation of the mucous membrane of the stomach and bowels, and in all cases of irritability of these organs.

CHAPTER IX.

BATHING.

Whether we consider bathing as a hygienic means, or curative agent, it is of paramount importance; for such is the human organization,—such the relation of the external surface to the entire system, that the slightest derangements in its functions produce effects on the constitution of no small magnitude.

The perpetual supply and metamorphosis or change of the organic elements of the body, are indispensable to its physiological or healthy condition. Now, all these exhausted elements are found immediately in the capillary vessels, and have no convenient chance of exit from the body, excepting that through the pores of the skin. When, therefore, the emunctuaries of the skin are obstructed; this vast amount of peccant matter is retained in the body; some of it remaining in the capillaries, while much of it is carried in the circulation, and thus, in both instances, giving rise to much irritation and fever. If the obstruction should prove permanent, these materials will be retained in the system, and continue to increase their mischief until they make their escape, *littles by littles*, through the other and more remote outlets.

But this is not the greatest mischief that arises from obstruction of the cutaneous exhalents: the functions of these organs involve the regulation of the temperature of the body. All these changes in the supply and metamorphosis or waste of the materials, are attended with a corresponding evolution of caloric or heat.* Now, this heat, according to the laws of the economy, was intended to have been regulated by the evaporation from the surface† As there is no evaporation sustained while the pores are closed up, the heat of the body must evidently increase at no slow rate. It will now be seen that in obstruction of the cutaneous exhalents, an evil of a two-fold character is evinced: first, a fever is generated by the retained perspiration, which, by its irritation increases the activity of the circulation, and hence the increased supply of oxygen and consequent combustion: secondly, it perpetuates this fever by the extinction of the natural means of its removal,—that is perspiration.

These mischiefs are liable to occur at any time that obstruction of the functions of the skin may take place; and the magnitude of the evil, will always correspond with the extent of the obstruction.

There are still other difficulties that are liable to occur from this cause: besides the bond of union between the different parts of the body, by means of the sanguiferous system of vessels, there is another—the nervous system. Now, the skin is more extensively supplied with nerves than any other part of the body: it must appear, therefore, that from the extensive nervous sympathy existing, that there is a great liability to mischief from this circumstance. The nerves are functiona-

* This is the source of *animal heat*.

† The disposition of the body to perspire, always corresponds with the amount of its sensible heat.

ries which superintend all the manifestations of vitality in the body. The morbid excitement, therefore, that is consequent on obstructions of the skin, must also be communicated to the entire system by this means. Whatever nervous depression or derangement there may be, it will always be attended with a corresponding depression of all the energies of the system.

There is still another chain of general association, i. e., the lymphatic system. These vessels have their chief origin in the skin; their functions, therefore, are extremely much influenced by obstructions of this organ. A large amount of the morbid matter that may accumulate in the capillary vessels, is carried into the circulation by the lymphatics. Thus the, now famishing, organs of the entire body, instead of being supplied with fresh and healthy blood, are irritated and oppressed by this impure and noxious mixture.

The secondary evils resulting from obstructions of the skin, are also of considerable note. The whole system laboring under such an accumulation of morbid agencies, it is but reasonable to expect that, in addition to the acute attacks implicating the general system, as in fevers, there is also a great liability to local inflammations and permanent chronic diseases, especially of those organs that from their construction, position, and use in the economy, are most exposed to the deleterious influences. The lungs are perhaps more exposed to this cause of mischief, than any other of the more important viscera; for while the blood must all necessarily pass through them, they are also liable to particular obstruction from the specific termination of the materials destined for expectoration.—Hence irritation, congestions, and inflammation of this organ are so extremely apt to occur;—hence the cough attending our *colds*,—the oppressive pain, and other inconveniences so frequently experienced in the breast. Nor does ulceration and consumption of the lungs occur less commonly from this than any other cause.

The intestines are next in exposure to this cause of disease. The frequency of derangements here is well known to all observers. The bowels, like the lungs, are compelled to act vicariously in the removal of the obstructed perspiration. Dysenteries, diarrhœa, cholera, &c., are of common occurrence.

It is unnecessary further to particularize the infinite, and endlessly varied forms of diseased action, that may result in the different parts of the system, from this prolific source: it must suffice to say that this is the most fruitful of all the causes of disease.

In view of all these facts, it cannot but appear obvious that the best remedy for this grand source of disease is of the

greatest importance, and this *remedy* cannot be expected to be found elsewhere but in attention to the surface.

Dr. Ewell remarks on this head, in his lectures on Hygiene:—"The evacuations of the body, from its superfluous, impure, and noxious particles, are no less necessary than its NOURISHMENT. The same power which changes and assimilates our food and drink, likewise effects the due and timely evacuations of the secretions. It is an object of the first consequence, that nothing remain in the body which ought to be evacuated; and that nothing be ejected, which may be of use to its preservation. How many persons do we find who complain of bad health, notwithstanding every attention they pay to air, aliment, exercise, and sleep; while others enjoy a good state of health, though totally careless with regard to these particulars, and all owing to a difference in the state of the evacuations. If these be disordered, the most rigorous observance of dietic rules is insufficient to insure our health; while on the contrary, most of these rules may be neglected, for some time, without any injurious consequences, if the evacuations be regular."

"The grand discharge, the effusion of the skin,
Slowly impair'd, the languid maladies
Creep on, and through the sick'ning functions steal;
As, when the chilling east evades the spring,
The delicate Narcissus pines away
In hectic languor; and slow disease
Taints all the family of flowers, condemned
To cruel Heav'ns. But why, already prone
To fade, should beauty cherish its own bane!
O shame! O pity! nipt with pale quadrille,
And midnight cares, the bloom of Albion dies."

[ARMSTRONG.]

Bathing stands at the head of all our means of promoting the natural and healthy functions of the skin,—its importance has been known, to some extent, from the earliest antiquity. The ancient Egyptians were particularly fond of the practice. From the Throne to the humblest subject this hygienic rule was observed; and though the Nile afforded abundant facilities for bathing, and was frequented even by Pharaoh's daughter, and her attendants, yet extensive *baths* were erected at public expense. The Hebrew Law-giver enjoined upon the Israelites, the strict observance of the ordinance of *washing* and *bathing*.

Among the Greeks and Romans bathing, if possible, was

still more popular; they, particularly the latter, erected *baths* of the most magnificent character: those of Caracalla were constructed with great taste. They are said to have been embellished with two hundred pillars, and furnished with sixteen hundred seats, and thus sufficient to accommodate three thousand people at a time.

Special modes of bathing.

I. VAPOR BATH.

There is no form of bathing so extensively useful as the vapor bath. Heat is the most relaxing and stimulating agent that we possess, and whenever applicable will seldom fail of the object of its use. The writer has elsewhere observed that the vital phenomena are manifested only at certain temperatures, and that at certain points of this the animal functions entirely cease.* It will appear then, that the diminution of the animal temperature is identical with disease. In all cases, therefore, in which the heat of the body is found to run low, as in *typhus fever*, *cholera* or *cholera morbus*, *palsy*, *asphyxia*, &c., the vapor bath is of incalculable service.

A moist heat seems to be peculiarly congenial to the body, it gently invigorates and equalizes the circulation,—this last circumstance makes the vapor bath especially valuable in local inflammation, particularly when implicating the pleura, or lungs.

A course of the bath eminently prepares the system for the easy, thorough, and successful operation of emetics, and it is a good plan always to precede the latter with it in difficult cases. So commonly are these two important means used together, by Thomsonian practitioners, that they have inherited the common title of "*the course of medicine*."

If the vapor bath did not fulfil any other indication than the promotion of the cutaneous excretions, it, as a remedial agent, would even then, perhaps, be equal to any other now known, and it is not probable that a more safe, prompt, and efficient means of restoring the excretions of the skin, will ever be discovered. Its value in this respect can only be

*See remarks on fever, page 66.

fully appreciated when the numerous mischiefs already hinted at, as resulting from obstructed perspiration, are properly considered.

It is impossible to notice all the particular indications for its use. But as the most prominent of these are pointed out in the part treating on practice; it is unnecessary to be particular here.

Various means of applying vapor to the body have been successfully used, the most common of which, is to place the patient on a split-bottomed chair, and surround him with a quilt or blanket. A shallow vessel, containing about two quarts of boiling water, is now to be placed under the chair, and hot bricks, or sand stones, carefully put into it successively as they cool off. The good effects of this process are much enhanced by placing the feet of the patient in a vessel of water, as hot as can be borne. When the bath is administered to persons in a carpeted room, or where it is wished to avoid wetting the floor, two narrow boards may be placed over a tub, and the chair set upon them; then placing the vessel into the tub, and bringing the quilt close around it, the bath may be administered as already directed.

Another and still more convenient way of administering the bath, is to procure some half dozen or more joints of copper or tin tube, say ten inches in length, and from a half to an inch in diameter,—let the joints gradually diminish in size, from one end to the other, so as to make the smaller end of one fit or embrace the larger one of the other,—the size of every subsequent tube diminishing from the two middle ones to either end. This arrangement of the tube is calculated to admit of shoving back all the small ones into the two largest, with a view of more convenience in carrying them. In addition to this, it is necessary to procure a plate of a copper or sheet-iron, sufficiently large to cover the opening of a large tea-kettle; through the centre of this, a hole should be made, large enough to admit of a screw, which should have a ring or flat top, so as to admit of turning it, and a shoulder below it to fit tightly on the plate. This screw should pass through the plate some four inches, and should enter the centre of a piece of iron, which should be half an inch wide, a fourth of an inch thick, and long enough to reach in a horizontal position, diametrically across the tea-kettle, about two inches below the plate through which the screw passes. All that is now necessary to the completion of the apparatus is a small elbow to the tube, and a hole midway between the screw and the edge of the plate, corresponding to the size of the elbow, and another one at any convenient place in the

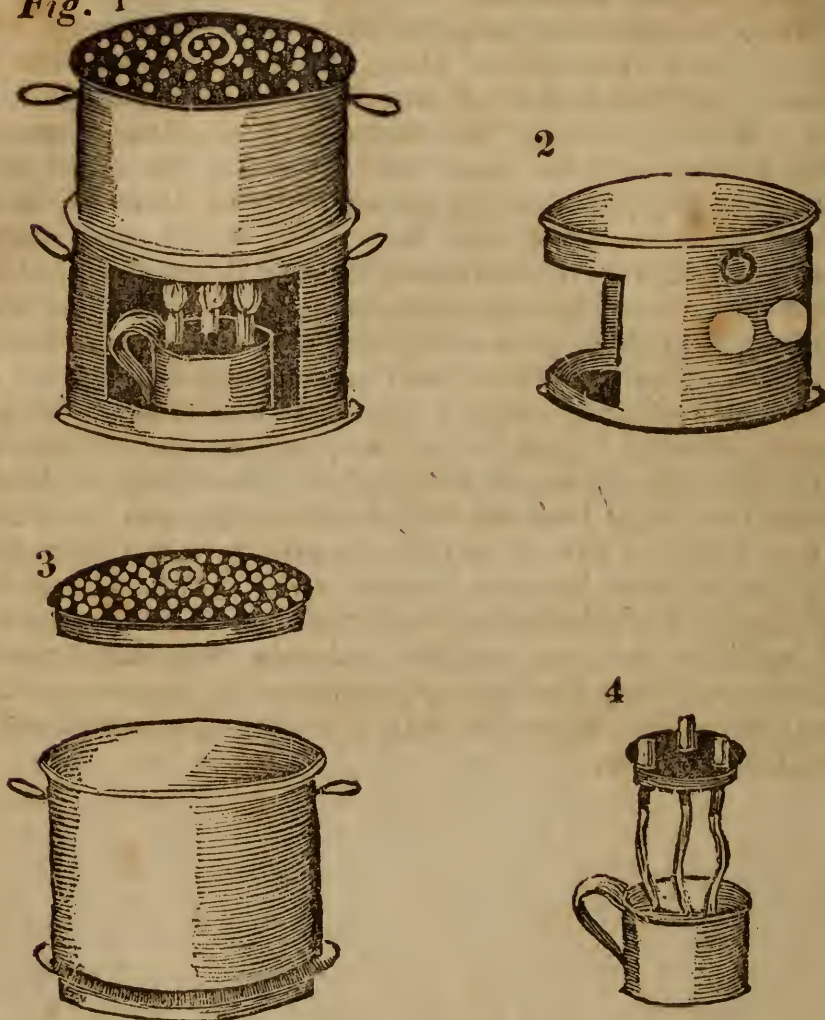
plate, to admit of replenishing the water during the operation of bathing. In order to make the plate rest on the mouth of the tea-kettle so as to confine the steam, it may be best to fasten a piece of wollen cloth to the under side of it, cutting it away around the holes.

When a bath is administered with this apparatus, the screw is to be passed through the plate, and made to enter the iron below, when the latter is to be put into a tea-kettle, one end first. Now by raising the screw with its fixings, so as to bring both ends of the iron below, against the sides of the tea-kettle, the plate may be tightly screwed down on the kettle. The latter, being half full of hot water, may now be placed on a hot stove or fire, and the tube inserted by its elbow, while the other hole is stoped with a cork. The other end of the tube is made to pass under the chair of the patient, who is to be surrounded with a quilt to confine the vapor.

Several very convenient fixings may be added to this tube: a slide, covering a hole in the tube, may be so constructed as to regulate the steam or temperature according to pleasure. A small box may be fixed with a cap on it, and with pieces of tube soldered into it, so as to fit into the main tube, at the junction between the two largest joints. This arrangement will admit of administering *medicated vapor baths*. Any volatile medicine, such as camphor, amonia, turpentine, and the essential oils may thus be communicated to the body with the greatest facility, while the skin is so much relaxed, and the circulation active.

By the use of a spirit lamp, a still more convenient apparatus may be prepared—a representation of which is here given:—

*Fig. 1 **



In the use of this apparatus nothing more is necessary than to place the patient on a chair, and surround him with a quilt, in the same way as for bathing with the heated bricks, and then placing the apparatus, fully trimmed, under the chair.

To trim or prepare the apparatus for bathing, the lamp must be filled with alcohol, and cotton wicks put into it the same as for any other lamp, when the cap may be placed on the

* Fig. 1, a view of the spirit-lamp bathing apparatus, complete. 2, a side view of the furnace part, without the lamp, or boiler. 3, the boiler with its perforated cap raised. 4, the spirit lamp with its cap raised to show the wicks.

lamp-cup—the wick wetted with some of the spirit, and the lamp lit and placed in the furnace under the boiler, which is to be nearly full of boiling water.

Medicated baths may be administered with this apparatus, simply by putting the intended preparation into the water of the boiler. With this, it is not necessary to have the oil, or concentrated form of the articles used, as the boiler is sufficiently large to receive the articles in their crude state. But still, the oils, gums, and spirits are much more convenient, and perhaps nearly as cheap.

In administering the vapor bath, the head of the patient should never be covered with the quilts, unless it should be necessary to relieve diseases of the head or face, as it is very unpleasant for the patient to inhale the hot vapor as long as it is sometimes necessary to continue the bathing.

The patient should always take a few drinks of some stimulating or diaphoretic teas before entering, and, sometimes, during the use of the bath, especially if it should be difficult to raise the perspiration.

It is always best to raise the heat of the bath gradually, so as not to increase the momentum of the circulation too rapidly.

If at any time the patient should feel faint, his face, neck, and breast may be wiped with a towel wrung out of cold water; or should this not prove sufficient, the heat of the vapor may be let down, either by moving the slide on the tube, if this is used, or by removing the apparatus. It is sometimes only necessary to open the quilts a little, and thus to let out the steam. Should the patient feel very faint, he may be placed in a horizontal position, by leaning him backward in his chair into the arms of a bystander. He should then have some cordial, stimulating drink, or tincture of myrrh. In the mean time, the bath should be kept up at a low temperature.

It is a rare case that patients grow faint, if the bathing process is properly conducted. But these remarks are here given, so that when this *does* occur, the practitioner may know what to do.

The length of time that the vapor bath should be continued at a time, is not very definite,—depending entirely on the nature of the disease,—the idiosyncrasy of the patient, &c.—But it is always advisable to continue it, unless the patient should become too weary, until he sweats freely, or is relieved from the pain, or uneasiness for which he is vaporized.—The practitioner is sometimes deceived in the presence, as well as the extent of the perspiration, by mistaking the condensed

vapor on the body for sweat. The surest sign of a free perspiration, is to see it profuse on the face.

It is a general practice either to shower the patient as he is taken out of the bath, with a basin of cold water, or to wipe him with a towel wrung out of the same, in order thus to excite a contraction of the skin, which is now unusually relaxed. This is a very good practice, and should generally be pursued, except in cases when it is intended to follow the bath with an emetic, or when the patient feels chilly, or, finally, when it is intended to keep him in a permanently relaxed condition, to promote some particular object in the treatment of his case.

The practice of applying cold water or the shower bath so suddenly after the hot vapor, seems objectionable to some persons. But however revolting the practice may seem to them, it is nevertheless safe and philosophical. All unacquainted with the practice, may be assured that they are less liable to *take cold* in this case, than they would be to take the same showering without being preceded with the vapor. "*Taking cold*" is a negative expression, and philosophically speaking, means *losing heat*, but in common parlance, it means a diminution of the animal temperature to the extent of producing injury to the system, by checking the excretions, &c. But it cannot be reasonable to suppose that an individual would be more likely to sustain injury from the loss of heat, when he has ten or fifteen degrees of it to spare, (as is the case after a good bath,) than he would be when the heat is of the natural standard, and there is none to spare.

II. TEPID BATH.

The warm bath has been in use both as a hygienic means, and as a remedial agent, from the earliest age of medicine, but it is now almost entirely superceded by the vapor bath, as the latter is more convenient, and efficient, and will, moreover, answer all the indications that can be fulfilled with the tepid bath. Nevertheless, at large bathing establishments the warm water is still considerably used.

In medical practice, the tepid bath is considerably serviceable in the treatment of many diseases of children, and in these cases, it is also perhaps more convenient than the vapor bath.

In the use of this bath for children, no fixings are necessary, more than a common wash-tub of suitable size. This is to be about two thirds full of water, as warm as the child can bear. The patient, after taking some suitable stimulating or diaphoretic drinks, is then to be immersed into this, up to his neck, and continued there, if comfortable, until perspiration appears on the face. During the time the patient remains in the bath, the stimulating drinks should be occasionally repeated.

Adults, in the use of this bath, require cisterns or other vessels of suitable size, and should likewise have the water as warm as it can be borne. In order to be successful in producing a free perspiration on grown persons, it is necessary to take stimulant and diaphoretic drinks pretty freely.

During the use of this bath, it is always very serviceable to apply friction to the surface of the body, by the use of the hand. This aids in relaxing the skin, and in bringing the termination to the surface.

When the patient is taken out of the bath, he should be briskly rubbed with a dry towel, thus to give activity to the skin and in other ways promote the good effects of the bath.

The general indications to be answered in the use of this, are about the same as for the vapor bath.

“Against the rigours of a damp, cold Heaven,
To fortify their bodies, some frequent
The gelid cistern; and where naught forbids,
I praise their dauntless heart. * * * * *
With us, the man of no complaint demands
The warm ablution, just enough to clear
The sluices of the skin; enough to keep
The body sacred from indecent soil,
Still to be pure, ev’n did it not conduce,
As much it does, to health, were greatly worth
Your daily pains. ’Tis this adorns the rich;
The want of this is poverty’s worst wo——
With this external virtue, age maintains
A decent grace; without it, youth and charms
Are loathsome. This the venal graces know;
So, doubtless, do your wives; for married sires
As well as lovers, still pretend to taste;
Nor is it less, all prudent wives can tell,
To lose a husband’s than a lover’s heart.”—ARMSTRONG.

III. SHOWER BATH.

The shower bath is more used as a hygienic means than as a curative agent. But there are many circumstances under which the application of cold water in this way, is very serviceable in the cure of disease. In feverish conditions of the body, more especially, showering with cold water is often of great utility. It has a tendency to equalize the circulation, and very remarkably promotes the functions of the skin. It is a very general practice among reformed physicians, to follow the vapor bath with a cold shower bath, as already stated.

The best time for administering this bath is in the morning, when the body is most vigorous. If administered at any time in the day, it is a good plan to precede it with a dose or two of some stimulating drink.

After the bath, the body should be well dried, and briskly rubbed with a coarse towel, in order thus to excite the functions of the skin, and produce a healthy reaction.

Apparatuses of various forms of construction, have been used for the administration of this bath; but it is unnecessary here to give a description of any of them, as there are but few who will not be able to make or procure one of some form or other. The only principle to be observed in the construction of apparatuses for this purpose, is to let the water be distributed in its descent, and to wet the whole body at the same time. This may be effected by causing it to pass through a tub or vessel having a perforated bottom. The quantity of water to be used at a time, varies according to the nature of the case, or the wish of the subject or patient: the amount generally used, is from a quart, to several gallons. The water is also used at various temperatures, according to the object to be accomplished; but it is the usual practice to take it at the natural temperature of common spring water.

IV. SPONGING.

Sponging with cold water, as a curative means, is of the greatest importance in many cases of disease. In all cases of high fever, and as a local means, in violent inflammation,

cold water applied in this manner, is of incalculable benefit. It has a tendency to let down the heat very remarkably, and to equalize the circulation. In all cases when there is much heat and dryness of the skin, this potent means should not be neglected, it should be the first thing that is done by the practitioner, who will, in many instances, find it sufficient to break up the most violent paroxysm of fever.

In some obstinate cases, it may be advisable to roll the patient up in sheets wet with cold water, and to renew them as often as they grow warm, until the febrile symptoms give way. So efficient, indeed, is this part of the Reformed System of Medical Practice, that a class of practitioners have embraced it as an exclusive system, and use it in all cases of disease, and the success attending their treatment is not a little astonishing.

The water used for this purpose, should be soft, fresh, and cold.



PART THIRD.

PHARMACY.

Few articles of medicine are furnished us by the hand of *nature* in such a state of preparation as to require no labor to apply them to their use. As found in their *crude* and *elementary* state, they were considered with reference to their general *character* and *virtues*, in the department of MATERIA MEDICA. It then belongs to PHARMACY to prepare these articles by *Pulverizing, Compounding, Extracting, Concentrating, Distilling, &c.*, so as to be ready for exhibition in the cure of disease.

Some medical substances, although possessed of valuable properties, may contain these so much attenuated, or buried so deeply in crude particles, that without their being concentrated or extracted, will be of no use. Again, some medicines are found very active, but are so transient in their effects, that unless combined with others acting more permanently, are of but little value. Others also, in their action, involve functions which are liable to be controlled by certain conditions which make it necessary to use with them articles possessing other properties. Thus *Lobelia*, for instance, will sometimes not produce emesis or vomiting, on account of too much relaxation of the stomach; which, however, is immediately produced if an *astringent* is combined with the emetic. Acidity of the stomach will also sometimes prevent emesis, which may likewise, in this instance, be brought about by combining with the emetic an alkaline substance. Moreover,

all medicines, chemical and mechanical agents excepted, are dependant for their action on the vital principle of the animal system, and are universally more or less facilitated in their action on the living tissues, by the use of excitants. Finally, some articles of medicine are too acrid or pungent to be taken alone, while others are very offensive to the taste and stomach, and make it necessary to be combined with some more mild and agreeable. These considerations, aside from the necessity of adapting all medicines to their various uses by forming them into pills, drops, ointments, plasters &c., show the necessity of embracing at least a short treatise on pharmacy in a work that is designed to benefit families and private individuals.

A chapter is devoted to dispensatory at the end of this part of the work. The utility of this is self evident.

CHAPTER I.

Medicines named according to their application.

I. RUBEFACIENTS.

The word Rubefacient comes from *rubens* 'red' and *fa'cio* 'to make;' meaning to 'make red.' The object in the use of these preparations, is to produce irritation, with a view to divert action from one part of the system to another. This class of remedies therefore embraces many preparations that have generally been confounded with the liniments. But as the latter are named according to their application, while the name of this extends only a little further, and embraces its effects, it matters but little which class they are placed in, as many of the liniments are also very irritating and produce quite a redness of the skin. These preparations are applied to the surface, and generally with much friction.

SINAPISM OR MUSTARD PLASTER.

Take of, Ground Mustard.....	4 parts.
Rye or wheat flour.....	1 part.

Add warm water to give it a proper consistence, and mix.—This application should remain on a part only long enough to produce a deep redness of the skin, and should never be left to remain long enough to produce blistering. When an application of this kind can be made, the sinapism will be found to be one of the best rubefacients.

Use.—To be applied to the bottoms of the feet, to relieve headache. Also useful to be applied to parts affected with rheumatism, &c.

RUBEFACIENT SOLUTION.

Take of Cayenne Pepper.....1 ounce.
Saleratus..... $\frac{1}{2}$ do.

Pour on this, a pint of boiling water; then let it simmer one hour, stirring it occasionally, when it is to be removed from the fire to settle. After this, the liquid is thrown off for use.

Use.—This preparation is intended for immediate use, and is an excellent rubefacient, and very well calculated to bring about an action in the surface. In low fevers this is an invaluable preparation.

RUBEFACIENT OIL.

Take of Oil of Cayenne Pepper.....2 ounces.
Oil of lobelia.....2 do.
Spirits of turpentine.....1 ounce.
Oil of dittany.....1 do.

Shake well together, and apply sparingly.

Use—This preparation is the best rubefacient the writer has ever used; it is permanent in its effects, and may be used in all cases in which medicines of this class are indicated.

HORSE RADISH,—(*Cochlearia Armoracia*.)

The leaves and root, bruised and applied, make a very good rubefacient, but are more particularly useful applied to the feet.

II. LINIMENTS.

Liniments are liquid preparations employed externally in

frictions or embrocations. They are generally composed of oily, spiritous, and gummy or saponaceous substances, such as the essential oils, alcohol, aqua of ammonia, soap, camphor, &c. They are particularly useful in rheumatism, neuralgia, quinsy, pleurisy, sprains, bruises and many other painful affections.

LINIMENT OF AMMONIA.

Take of Water of Ammonia,.....1 ounce.
Olive Oil,.....4 ounces.

Mix well.

Use.—This is a popular remedy, in common practice, for inflammatory affections of the throat, catarrh, and pectoral diseases of children generally. It may be rubbed on the skin, or applied by saturating a piece of flannel and laying it over the affected part.

BATHING DROPS OR STIMULATING LINIMENT.

Take of Best alcoholic tincture of lobelia seed,.....1 pint.
Tincture of cayenne pepper, (*best.*) 1 do.
Oil of sassafras,.....2 ounces.
Oil of pennyroyal,.....2 do
Oil of wild marjorum, or dittany,.....2 do
Gum camphor, ...2 do
Castile soap, ...2 do

Shave the soap and camphor fine; put it into a bottle, and add all the remaining ingredients,—shake until the soap and camphor is dissolved, and it is fit for use.

Use.—This is one of the best and most convenient of all stimulating liniments, and may be advantageously used in all cases in which articles of this kind are indicated, especially, in inflammatory swellings, sprains, bruises, rheumatisms, pains in the breast, side, bowels, &c.

STIMULATING AND RELAXING LINIMENT.

Take of Stramonium ointment,.....2 pounds.
Tincture of lobelia, (*best.*).....4 ounces.
Tincture of cayenne pepper, (*best.*).....4 do.
Oil of Sassafras,.....2 do.
Oil of pennyroyal,.....2 do.
Spirits of turpentine,.....2 do.

Melt the stramonium ointment, and, adding the rest of the ingredients, mix them well, and keep close.

Use.—Applied to the throat and neck, it is an excellent remedy in quinsy, croup, and sore throat attending scarlet fever. And applied over the breast, shoulders, and back, will relieve asthma in an astonishingly short time. It may also be used in all cases in which the foregoing is recommended, or is found useful.

OPODELDOC.

Take of Common Soap,.....3 ounces.
 Camphor,.....1 ounce.
 Oil rosemary,.....1 drachm.
 Oil organum.....1 do.
 Alcohol,.....1 pint.

Dissolve the camphor and oils in the alcohol; then add the soap, and digest by means of a sand bath, till it is dissolved.

Use.—Same as for other liniments of this class.

ANODYNE LINIMENT.

Take of Gum Camphor,.....1 ounce.
 Extract of wild lettuce..... $\frac{1}{2}$ do.
 Oil of hemlock,..... $\frac{1}{2}$ do.
 Tincture of lobelia,.....1 pint.

Shave down the camphor, and digest in the tincture for several days, shaking it occasionally; pour off the tincture, add the oil and mix.

Use.—This is an excellent combination to relieve pain in swellings, sprains, toothache, after pains, inflamed breasts, rheumatism, &c. Use it frequently with friction.

LINIMENT FOR BURNS AND SCALDS.

Take of Olive oil,.....
 Fresh flaxseed oil.....
 Lime water,.....
 } equal parts.

Shake well together and apply to the parts affected.

III. OINTMENTS.

The term *ointment* or *ungentum*, comes from *ungere*, 'to an-

noint.' These preparations are intended for topical application, and are generally of a consistence somewhat analagous to lard, softer than salves or plasters, and harder than liniments. They are usually made of some vegetable substance, incorporated with *lard, butter, wax, &c.* Their use is to sustain a local application of medical substances, externally, to the parts affected; and serve the compound purpose of protecting parts deprived of their integuments or skin, from the atmosphere, while at the same time, they serve to cleanse and heal the diseased surface.

SIMPLE STRAMONIUM OINTMENT.

Take Stramonium leaves, (*green*;) bruise them to a pulp; put them in a pot or kettle; pour on enough melted lard and spirits (*equal parts*;) to cover them; simmer over a slow fire, till the leaves are nearly of a crisp; then press out the lard and return it into your kettle, to receive a fresh lot of the leaves,—adding spirits,—and thus continue until you have the strength of three kettlefulls of the leaves, when the liniment must be strained and put up in jars.

Use.—This is very good for piles, burns and scalds, wounds, chafes, and ulcers. But this ointment is chiefly used as a basis for other preparations.

PILE OINTMENT.

Take Yarrow, (<i>leaves and tops</i> ;).....	} equal parts.
Sumac, (<i>bark of the roots</i> ;)	

Boil these in water so as to extract the strength; strain and boil down to the thickness of molasses; then add an equal weight of *stramonium ointment*, and incorporate well and put it up in small prescription bottles.

Use.—This, applied as an ointment, night and morning, will be found an excellent remedy for the piles, and is also good in venereal sores, &c.

THOMSON'S PILE OINTMENT.

"Take lovage seed, burdock seed, and prickly ash bark, each one ounce; bark of green osier, the flowers of yarrow and pipsissaway, each two ounces; pulverize and simmer all the articles well together in two pounds of fresh butter or lard, for two or three hours over a slow fire; or it may be kept in a white earthen or brass vessel, where it will simmer very slow-

ly for a day or two, in order that all the strength of the articles may be extracted; then strain and press out all the liquor."

Use.—"This is a very valuable article for piles, and every species of old sores. Before using it, let the sore be washed with clarified lime water. This is also an excellent ointment to put upon the neck and breast for quinsy or putrid sore throat, after which put a flannel about the neck. It is also good for stiff joints and rheumatic pains, in such cases add a little cayenne."

YARROW OINTMENT.

Take yarrow blows any quantity and simmer them in fresh butter.

Use.—For piles, apply to the parts affected.

J. Thomson.

IODINE OINTMENT.

Take of Iodine,.....	$\frac{1}{2}$ drachm.
Iodide of Potassium.....	2 drachms.
Lard.....	2 ounces.

Rub the whole together in a wedgewood mortar, so as to form a liniment of a mahogany color.

Use.—This is the only certain remedy now known for the cure of *bronchocele* or *goitre*, sometimes called *big-neck*. It is applied with friction over the part affected. It is also useful in all scrofulous tumors, and ulcers.

WELLS' OINTMENT FOR SCROFULA.

Take of Tobacco (<i>best quality</i>).....	1 ounce.
White ash moss.....	4 ounces.
Soot.....	4 do.
Tar.....	4 do.
Anti-spasmodic drops*.....	2 do.
Hogs lard.....	4 do.

Boil the tobacco, moss, and soot in two gallons of water, down to one gallon, strain off and boil down to one quart; then add the lard and tar, and simmer over a fire of coals, down to a pint and a half, and add the anti-spasmodic drops and stir till cool.

Use.—Applied for scald head, itch, scrofulous ulcers, &c., will be found excellent.

* These are composed of equal parts of tincture of lobelia and cayenne pepper.

OINTMENT FOR ITCH.

Take of Sulphur (<i>pulverized</i>).....	1 ounce.
Venice Turpentine.....	$\frac{1}{2}$ do.
Oil of lavender.....	$\frac{1}{2}$ drachm.
Stramonium Ointment.....	2 ounces.

Mix the whole well in a wedgewood mortar.

Use.—For *itch* and *tetter*, apply to the parts affected for four nights in succession; then wash off and change clothes.

DR. JOHN THOMSON'S OINTMENT FOR BURNS.

Take Beeswax and Burgundy pitch and melt them together; then mix with its sweet oil, until the compound has the consistency of ointment.

Use.—Dr. Thomson says that this will ease the pain of a burn almost immediately on its application. It is also good for fresh cuts, or wounds and bruises of the flesh.

IV. PLASTERS.

From *emplastrum* “to spread upon.” Plasters, like ointments, are intended for external application; they are of more consistence than the latter, and are generally hard enough in common temperatures to retain their solid form, but are rendered soft or pliable by the heat of the body so as to adhere and feel comfortable to the parts to which they are applied. These preparations generally have an oily or fatty substance for their base, in which are incorporated the various medicinal substances upon which their various effects are dependent.

In view of receiving permanent benefit from the use of plasters they should be worn for some time, but should be renewed every few days, and the parts washed with soap, and afterwards well brushed with a stiff flesh brush.

THOMSON'S STRENGTHENING PLASTER.

Take of the green leaves of burdock and mullin, equal parts; bruise and put them into a kettle, with a sufficient quantity of water; boil them well; then strain off the liquor, pressing the leaves: boil down to the thickness of molasses, and then add, a quantity, of rosin equal, in weight, to that of your syrup,

and one third as much of *turpentine*; simmer until the water is all evaporated, when it may be thrown into a basin of cold water, and as it is cooling, worked into sticks. The consistency of the plaster is regulated by the quantity of turpentine; if too thick or hard, add more of the latter, and *vice versa*.

Use.—This plaster is very good to relieve weakness in the *back, breast, and loins*. It should be spread on soft leather, and applied to the parts affected.

DR. BEACH'S STRENGTHENING PLASTER.

Take of hemlock gum, and one fourth the quantity of white turpentine; dissolve, and strain them together.

Use.—This forms an excellent strengthening and stimulating plaster: useful in chronic rheumatism, weakness in the back, &c.

DR. JOHN THOMSON'S STRENGTHENING PLASTER.

Melt two ounces of rosin; add to it a teaspoonful of cayenne pepper, and lard sufficient to make it of the proper consistence, which may be known by dipping a knife or spoon into it, and then putting it into cold water. If you get it too soft, add more rosin and pepper; if too hard, more lard and pepper.

Use.—To be applied as a plaster to the back or limbs, for rheumatic pains. Decayed teeth that are troublesome may be filled with it, and thus relieved immediately. Applied to the face or breast it is excellent for the cold or ague affecting those parts, and if applied to the face, will relieve it in cases of *tic dolozeaux*.

ADHESIVE PLASTER.

Take of Common turpentine,.....	2 pounds.
Salt butter,.....	$\frac{1}{2}$ pound.
Beeswax,.....	2 pounds.
Balsam of fir,.....	2 do.
Rosin,.....	2 do.

Put the whole into a suitable vessel and melt, stirring it so as to incorporate it well. The quantity of *rosin*, and butter should be regulated according to the season in which it is intended to be used; in the winter season it requires more butter, and in the summer more rosin.

Use.—This is spread on suitable cloth, which is to be cut into narrow strips and used to dress wounds and cuts. By it the edges of cuts &c., may be brought together without the use of the needle.

It is applied in the following manner:—First take a strip of the plaster and fasten one end of it in the middle of one side of the wound, so as to bring its direction directly across it; then place the hand directly against the opposite side and thus draw the lips of the wound together, when the strip may be laid down and fastened. If the wound or cut be large, a strip may, in like manner, be placed on each side of this, midway between the first strip and the margin of the wound. After this, the intermediate parts may be laid over with additional strips, being careful to leave space sufficient to admit of the escape of such matter as may accumulate in the wound. The adhesive plaster may likewise be advantageously used to fasten and secure other dressings and bandages that may be applied to wounds, and sores.

THOMSON'S CANCER PLASTER.

Take and fill a large brass kettle with the heads of red clover; keep them close by placing on them a weighty substance; pour on water sufficient to cover the clover, and boil it for several hours; after which, this lot is to be removed, pressing out the liquid, and a new lot of the clover to be replaced and boiled again in the same way as before. This is then likewise to be removed, and the liquor strained and returned into the kettle to be boiled down to the consistence of tar; taking great care not to burn it. To avoid burning it, the extract, when it is becoming somewhat thickened, might be put into a tin basin, and this then boil in a kettle of water, and thus evaporated to the proper consistence.

Use.—Spread on a delicate skin, or piece of leather, (or what is better, a piece of beef's bladder, split and rubbed between the hands until it becomes soft,) and placed on the sore, will be very good in healing cancers, and scrofulous ulcers.—At the dressings, the sores should be well washed out with soap suds and some astringent wash.

IRRITATING PLASTER.

Take of mandrake root, blood root, Indian turnip, and poke root, finely pulverized, of each half a pound; cover with alcohol, and let it stand until nearly dry. Melt four pounds of pure or strained Burgundy pitch, and add half a pound of pure Venice turpentine. Then stir in the powdered roots, and incorporate the whole well together. Simmer until formed into a soft plaster.—(*Beach's Family Physician.*)

Care is necessary in the preparation of this plaster, so that

the powders are not burnt by the hot pitch and turpentine.—It should be prepared on coals.

Use.—This plaster is designed to be applied over the parts, in cases of deep seated chronic affections, such as affections of the *liver, lungs, stomach, kidneys, spine, and sciatica or hip-ale*. Spread on a piece of leather and applied, it produces a severe itching; and in the course of a day brings out a crop of small pustules which discharge matter.

This preparation was invented by Prof. Morrow of the Eclectic Medical Institute at Cincinnati O.

ASTRINGENT PLASTER.

Boil the inner bark of *white oak* in water, and evaporate the liquid to the consistence of tar. *Use.*—Good for ruptures, and extreme relaxation of parts; also for foul ulcers.

V. SALVES.

Salves, like ointments, are intended for external use, but differ from them in consistence, and form of application; the former being applied in the form of a plaster, while the latter are generally used in the form of a liniment. Salves are calculated for open sores and raw surfaces, and serve as well to protect the parts from the atmosphere and cold, as to impart such properties as are calculated to facilitate the healing process. The consistence of these preparations ought to be so adapted to the temperature of the atmosphere, as to admit of being spread on cloth without the aid of additional heat.

THOMSONS HEALING SALVE.

Take of Beeswax,.....	1 pound.
Salt butter,.....	1 do.
Turpentine,.....	8 ounces.
Balsam of fir, ...	12 do.

Simmer together and strain.

Use.—Very good to heal fresh wounds, burns, and other sores.

BLACK SALVE.

Take of Flaxseed oil, ... 1 pint.
 Sweet oil, ... 1 do.
 Red lead, ... $\frac{1}{2}$ pound.

Simmer down to a salve, being careful not to burn it.

Use.—Few articles seem to do better in healing up old sores, and putrid ulcers. This preparation is very analagous to Shepard's salve or Judkins ointment. Perhaps the better way to prepare this, is to put the oils in a pot and heat them until they will scorch a feather, when the lead may be stirred in to form the salve.—This salve is very highly recommended by Dr. J. Thomson.

GREEN SALVE.

Take of Stramonium ointment, ... 1 pound.
 Turpentine, ... 1 do.
 Bay berry tallow, ... 1 do.

Melt together, stirring it some, while cooling. If the bayberry tallow cannot be had, take half a pound each of rosin and sweet oil, in its stead.

Use.—The same as other healing salves.

VI. POULTICES.

In these preparations we take medicines in a state more simple and crude, and apply them to parts affected. They act more promptly than *salves*, *ointments*, or *plasters*; having nothing to intervene between the medicines and parts affected, (such as *oils*, *gums*, *wax*, &c.)

Poultices are designed either to disperse tumors, promote suppuration, relieve inflammation, or produce a healthy discharge from ulcers. They ought generally to be kept warm, and always moist or wet, and should be frequently renewed.

BREAD AND MILK POULTICE.

Boil a sufficient quantity of crumb of bread, in sweet or fresh milk, to thicken it, and stir in one tea spoonful of ground ginger.

Use.—This forms a very good application in cases of pois-

onous bites and stings, painful swellings, and sores. It should never be suffered to get dry and hard, which may be prevented by sprinkling warm water or milk on it. One of the best things about this poultice, is, that the ingredients of which it is made, are always at hand.

ELM POULTICE.

Take of fine slippery elm bark, a sufficient quantity; stir it in hot milk, or water, a quantity sufficient to make it of a proper consistence.

This poultice is emmollient, relaxant, and in point of efficiency, there are few that excel it in any case where medicines of this class are indicated.

CARROT POULTICE.

Take of Boiled carrots, (<i>bruised</i> ,)	1 pound.
Flour, ...	1 ounce.
Butter,.....	$\frac{1}{2}$ do.

Mix them with a sufficient quantity of hot water, to form a pulp.

Use.—This will be found a valuable application to sores, swellings, scrofulous, and many other inveterate and irritable ulcers.—(*American Prac.*)

ALKALINE POULTICE.

Take of ley, rather weak, warm it, and stir in a sufficient quantity of fine slippery elm bark to form a poultice.

Use.—This is very good in old sores, fistulous ulcers, white swellings, and inflamed breasts.

YEAST AND CHARCOAL POULTICE.

Take of good hop yeast, warm it, and stir in fine charcoal, a sufficient quantity to form a poultice.

Use.—Apply in mortification, adding a table spoonful of *compound tincture of myrrh*. It is likewise very excellent in foul ulcers that are slow in healing; also good in cancer sores.

POULTICE FOR SCROFULA.

Take of the powdered roots entering into the *irritating plaster*, equal parts; mix them up in good yeast, and apply in the form of a poultice.

ANODYNE POULTICE.

Take of stramonium leaves, a sufficient quantity; bruise them into a pulp; add slippery elm powder and warm water, just enough to form a poultice.

Use.—This is the best preparation to relieve pain, even in deep seated parts, and in inflammatory swellings, that the writer has ever been able to obtain. It should be kept warm and moist. Painful cancers are relieved by its application, in a remarkably short time.

ASTRINGENT POULTICE.

Take of the astringent tonic compound, a sufficient quantity, add slippery elm powder or wheat flour, enough to make it adhesive, say one fourth the quantity, and mix up with boiling water.

Use.—In healing old ulcers, cancers, &c., an astringent poultice, sometimes, is very necessary, especially if the sore is filled with spungous flesh. This is a very excellent application, if used cold, to joints that are much disposed to luxation;—also good for ruptures.

RELAXANT POULTICE.

Take of Lobelia herb, (<i>fine</i> ,)	2 ounces.
Thorough wort, (<i>fine</i> ,)	1 ounce.
Slippery elm, (<i>fine</i> ,)	1 do.

Mix well with warm water.

Use.—This is an excellent application in cases of painful inflammatory swellings, and as an application to luxated joints of long standing, to prepare them for reduction.

STIMULATING ASTRINGENT POULTICE.

Take of the Diaphoretic Powders, a suitable quantity, and form into a poultice with powder of slippery elm or wheat flour, and hot water.

Use.—Good to restore parts affected with gangrene; also excellent to apply over the throat in scarlet fever, and putrid sore throat.

VII. FOMENTATIONS.

Fomentations are simple preparations, which are most generally made of bitter and relaxing herbs, and are applied with water, as hot as can be borne. They serve to relieve pain in affected parts, by taking off the tension and spasm of the muscles.

RELAXING FOMENTATION.

Take of Lebelia herb and thoroughwort, equal parts, and put them into a basin; throw on hot water sufficient to cover them.

Use.—Place the affected parts over the basin, and put the herbs on them; then keep wet constantly, by gently throwing on the liquor. The latter may be kept hot by placing in it, occasionally, a small sand stone, or piece of brick, previously heated. This process is to be continued until relief is obtained, which generally occurs in from 15 to 30 minutes.

When it is desired to apply a fomentation to parts that cannot be extended over a vessel, the herbs may, nevertheless, be applied, being previously a little pressed so as to prevent the fluid from running out of them after they are applied. But perhaps the better way to apply the fomentation, in this case, is to put the herbs into a linnen bag, large enough to cover the affected part, and thus apply it. It may also be kept warm by applying a hot brick to the exterior of the herbs. The application must be continued sufficiently wet by sprinkling on, occasionally, a little hot water.

FOMENTATION OF BITTER HERBS.

Take of Catnip, ...	} equal parts.
Tansey, ...	
Wormwood, ...	
Hoarhound, ...	
Camomile, ...	

Boil for a few minutes in water.

Use.—This is an excellent application in all inflammatory affections, whether superficial, or deepseated, especially, in painful tumors, and visceral inflammations.

HOPS.

Hops, boiled in water or vinegar, make a very good fomentation for inflammation of the *throat*, *bowels*, and for *colic*.

STRAMONIUM LEAVES.

If used as ordered in the application of hops, these are likewise very good; and so are elder leaves.

VIII. WASHES.

These are preparations for external use, they are intended, chiefly, for cleansing and cooling the skin, in fevers, eruptions, &c., also for cleansing sores. Washes or lotions, are generally made of water in which some medicinal substances are suspended.

COLD WATER.

Soft water that is clean, and cold, is one of the best applications in burning fevers; it lets down the temperature remarkably, and relieves the patient very much. Its use, has been particularly pointed out in the body of the work, and will not here require attention.

ALKALINE WASH.

Take one half an ounce of salerætus; dissolve it in a pint of warm water, then, when cool, it is ready for use.

Use.—This is a good preparation to remove the oily substance that commonly accumulates on the skin of the sick, and well. It also promotes the circulation, and facilitates cutaneous transpiration; (*swcating*.)

ASTRINGENT WASH.

Take of the astringent tonic compound, an ounce, to a pint of boiling water; scald, and when cool, strain.

Use.—This is intended to be used at the time of dressing ulcers, &c., for cleansing out the sore. It is a very good wash for scald-head, and for the canker sore mouth and throat.

SOLUTION OF CHLORINATED SODA.

“Take of chlorinated lime a pound; carbonate of soda two pounds; water a gallon and a half. Dissolve the carbonate of soda in three pints of the water, with the aid of heat. To the remainder of the water add, by small portions at a time, the chlorinated lime, previously well triturated, stirring the mixture after each addition. Set the mixture by for several hours that the dregs may subside; then decant the clear liquid and mix it with the solution of carbonate of soda. Lastly, decant the clear liquor from the precipitated carbonate of lime, pass it through a linen cloth, and keep it in bottles secluded from the light.”—(*U. S. Dispensatory*.)

Use.—This is one of our best remedies in cleansing and healing indolent, scrofulous, syphilitic, and gangrenous ulcers. It is likewise good in ulceration of the gums, carbuncle, mortification, and putrid sore throat.

Chloride of Lime is much cheaper, and as it will answer very well instead of the chlorinated soda for many purposes, it should not be overlooked in this place. A wash may be prepared from this, by adding two or three drachms or about a half a table spoonful to a pint of water, and afterwards filtering it. This solution is used for medical purposes the same as the above. It possesses the power of arresting animal and vegetable putrefaction, and of destroying pestilential and infectious miasms. A *corpse* may be preserved for a long time by wrapping it up in a sheet completely wet with a solution made of the strength of a pound of chloride of lime, to two gallons of water.

IX. GARGLES.

These are preparations that consist of infusions, decoctions, &c. They are designed as washes for sore mouth and throat, and are generally made of stimulating and astringent vegetables. Their use, with adults is attended with little inconvenience, but children require assistance, which may be rendered by tying a piece of linen to a probe or stick, and thus applying the medicine by dipping the swob first into the wash and then applying it alternately.

ASTRINGENT GARGLE.

Take of the Astringent Tonic Compound one ounce, and scald it in half a pint of boiling water, and strain.

Use.—In scarlet fever, putrid sore throat, quinsy, nursing, and mercurial sore mouth, this will be found a very good remedy.

GARGLE FOR SORE THROAT IN SCARLET FEVER.

The following *recipe* was communicated to the writer by a friend and from a knowledge of the remarkable success that has attended its use in the hands of several respectable physicians, it is considered worthy of a place here.

Take of Privet, (<i>the leaves,</i>).....	} equal parts.
Sage, (<i>the leaves,</i>)	
Black Haw, (<i>the bark of the root,</i>).....	
High black berry, (<i>bark of the root,</i>).....	
Sumac, (<i>berries,</i>).....	

Boil in a kettle till the strength is extracted; strain and add to every quart one teaspoonful of fine borax, one teaspoonful of fine alum, one tablespoonful of fine gun powder, and one gill of spirits turpentine.

It is advisable to make only a small quantity at a time as it is apt to sour.

Use.—Make a swab by tying a piece of cloth on a small stick, and thus wash the throat and mouth with the liquid.—This article in some parts has gained for itself considerable popularity, in the cure of the sore throat attending the scarlet fever.

Remarks.—The above may seem to be a harsh remedy in the botanic practice, but as it is not to be taken internally, the objectionable ingredients will not be likely to do any mischief.

X. INJECTIONS.

As the too frequent use of cathartics is known to be very injurious, and as an operation of the bowels is sometimes indispensable when cathartics, administered in the ordinary way,

are entirely inadmissible, the use of enemas or injections, is very important. But the extent of their beneficial effects is, in this as in other cases, much dependant on the kind, and character, of the medicine used. The use of this method of medication is, in general, too much neglected. Many cases of disease occur, in which it is impossible to succeed without the use of the syringe, especially in bowel affections, locked jaw or tetanus, &c. Life may be sustained for a considerable time when food cannot be taken in the ordinary way, by the use of appropriate injections.

The application of these preparations is now made so simple with the use of the syringe, that directions in this matter, are hardly necessary. When the preparation designed for the injection is made, and strained off, the syringe may be filled by placing the point into it, and then gently drawing back the piston or handle; or the cap may be taken off and the preparation thrown into the syringe in this way. After the syringe is thus filled, the point must be turned upward, and the piston pushed up until the fluid begins to discharge, in order thus to remove all the air that may be drawn into the syringe. The latter may then be placed in the hand of the patient in a position so that he may introduce it; when the syringe must be firmly held by the left hand of the nurse, so that he may, with his right, gently throw up the contents, by pushing back the piston. The injection, thus administered, does not make any exposure of the patient necessary; each sex, moreover, is capable to administer to its own wants, in this matter. Enemas may, in general, be made of the same articles that would be administered per stomach, for similar purposes; few specimens are, therefore, necessary.

COMMON INJECTION.

Take of Sweet milk,.....	1 pint.
Sweet oil,.....	1 ounce.
Molasses, ...	2 ounces.
Salernatus, <i>fine</i> , ...	1 teaspoonful.
Slippery elm, powder, ...	1 do.

Warm the milk in a pan, and stir in the other ingredients.

Use.—In dysentery, cholera infantum, colic, inflammation of the bowels, costiveness, &c., this is an excellent remedy.

RELAXANT INJECTION.

Take of a strong tea of thoroughwort, one pint, and add a

heaping teaspoonful of green lobelia, and as much slippery elm powder; stir it well, and when cool, it is ready for use.

Use.—This is a suitable remedy, in all cases when it is found that common diaphoretics, per stomach, will not work well; and, indeed, in all cases in which a free relaxation of the system is required; particularly in burning fevers, &c. By adding to this, one or two more teaspoonfuls of lobelia, one of nervine tonic, and a quarter of cayenne pepper, it forms an excellent preparation for strangulated hernia, locked jaw or tetanus, fits, hydrophobia, colic, intussusceptio, &c.

ASTRINGENT INJECTION.

Take of the astringent tonic compound, two ounces, scald it in a large bowl, and strain; then add a teaspoonful of tincture of myrrh.

Use.—The astringent enema is very serviceable in dysentery, diarrhœa, hemorrhages from the bowels, diabetis, piles, and prolapsus.

STIMULATING INJECTION.

Take a strong tea of pennyroyal or peppermint, and add half a teaspoonful of cayenne pepper, as much lobelia, (*green*), and one teaspoonful of tincture of myrrh.

Use.—This is particularly serviceable in all cases of constipation and torpidity of the bowels, and in cases where mortification of the intestines is apprehended.

SOAPSUDS.—If made very strong, this constitutes a very good enema for habitual costiveness, and in some cases of dysentery.

CHAPTER SECOND.

Medicines named according to their forms of preparation.

I. POWDERS.

Under this head, may be arranged all those preparations kept in the dry state, which are generally of the consistence

of fine flour. These are the most simple preparations of all medicines, and are made with the least injury to the articles used. They should always be kept in tightly stopped vessels, and some, in order to preserve them, it is necessary to exclude from the light.

DIAPHORETIC POWDERS.

Take of Bayberry, ...	1 pound.
Pleurisy root, ...	1 do.
Ginger, ...	1 do.
Colic root,*	2 ounces.
Cloves, ...	2 do.
Cayenne pepper, ...	2 do.

Pulverize, and mix well by means of a sieve.

Use.—This is a medicine of great value, and of very extensive application. Its great utility seems to arise from the combination of its stimulant and astringent properties, which, in this instance, are attended with effects, much more permanent than those following either of these alone. The advantage of these combinations were never brought into popular favor, until Dr. Thomson introduced his composition diaphoretic powders, but they have now gained for themselves such a reputation that it is not necessary to say any thing in their favor.

The diaphoretic powders, as the name imports, are good to promote diaphoresis or sweating; and to warm up the system and thus produce a healthful glow all over the body, and an equalizing effect on the circulation. They sustain the reacting power of the system, and hence are very beneficial in all cases of disease, which have their cause in debility. In colds or catarrh, a teaspoonful of the powder, with as much sugar, and one tablespoonful of cream may be scalded in a teacupful of boiling water, and taken before going to bed; or a tablespoonful may be scalded in a large bowl of boiling water, sweetened and creamed to the taste, and taken at intervals of from ten to fifteen minutes, being surrounded by a blanket, and having the feet placed in a pail of hot water. In this way, oft times a fever, and many other cases of disease, may be entirely thrown off in their first stages. A tea of those

*A notice of this valuable plant was accidentally omitted in the part treating on materia medica. Its botanical name is *liatris spicata*, and it belongs to class 17 and order 1. It has a perennial, bulbous, oblong, root, which has many small fibres. The stem is round, about three feet high, and bears a tassel of scaly, purple colored flowers. The leaves are linear, very long, and curved. The plant is found in prairies and meadows in the Western States. It is an excellent diaphoretic, diuretic, and anodyne.

powders is very good for pain in the stomach, bowels, back, and breast, and will also sometimes cure the headache. In dysentery it is an excellent remedy; and in low fevers it is much better than any kind of spirits. A strong tea is generally prepared of this article, to be used during the operation of an emetic, and during the operation of a Thomsonian course of medicine; as well as during the use of the common vapor and shower baths.

Dose.—A teaspoonful in a teacupful of boiling water, well sweetened and creamed to the taste.

THOMSON'S COMPOSITION DIAPHORETIC POWDER.

Take of bayberry, two pounds, ginger one pound, cayenne pepper and cloves of each two ounces; all finely pulverized and mixed.

Dose.—A teaspoonful in a teacupful of boiling water sweetened and creamed to the taste.

DR. J. THOMSON'S FORMULA.

Take of bayberry, ginger, poplar, and hemlock bark, of each one pound, of red or white oak bark, half a pound, three ounces of cayenne pepper, and two ounces of cloves; all finely pulverized and mixed.

Dose.—A teaspoonful in boiling water sweetened.

Both these preparations are used as above.

SUDORIFIC POWDER.

Take of Lobelia, (<i>brown</i>), ...	1 ounce.
Greek Valerian, ...	1 do.
Prickly Ash bark, ...	1 do.
Cream of Tartar, ...	1 do.

Pulverize, and mix well.

Use.—Excellent in fevers, pleurisy, erysipelas &c. This powder forms a valuable sudorific, and diaphoretic, and is eminently adapted in all cases in which a copious sweat is required; when the skin is dry and hot, and when it will not do to give the active stimulants, such as pepper and ginger, this serves a good purpose. The dose is half a teaspoonful, every 15 or 20 minutes, until perspiration appears, when it may be kept up with doses less frequent.

EMETIC POWDER.

Take of Lobelia (*brown*,).....1 ounce.
 Blood root.....1 drachm.
 Saleratus.....1 do.

Pulverize separately and mix well.

Dose.—A teaspoonful every fifteen minutes till it operates.

Use.—This, perhaps, in point of efficacy and promptness, is the best emetic that can be used, and may be safely administered in all cases in which an emetic is indicated.

LOBELIA EMETIC.

Pulverize the leaves and pods of the *lobelia inflata* to a fine powder, and sift through a fine seive. Keep it close in a dark glass vessel. This is the article sometimes referred to under the name of "*green lobelia*." The "*brown lobelia*" consists simply of the ripe seed of the lobelia very finely pulverized.

Dose.—Same as the above.

Use.—In asthma, croup, and in whooping-cough, this emetic is particularly serviceable, but like the above, it may safely and advantageously be used in all cases in which an emetic promises relief.

CATHARTIC POWDER.

Take of Mandrake root.....2 ounces.
 Peppermint herb.....1 ounce.

Pulverize, and mix with a fine seive.

Dose.—A large teaspoonful in two portions one hour apart.

Use.—In bilious fever, jaundice, dropsies, and, indeed, in all cases in which a cathartic is indicated, this is a very good medicine. Its effects on the liver, and glandular system, generally, is equal to that of calomel, but has none of its pernicious and dangerous consequences to follow it. In its operation it is somewhat slow but permanent, and continues longer than almost any other cathartic; and what is another excellent quality about it, is that it never is followed by constipation of the bowels, as is the case with nearly every other kind of cathartics. This will not prevent the use of water, or food, but operates better if the food consists of gruels and broths.

COMPOUND CATHARTIC POWDER.

Take of Mandrake root,.....	2 ounces.
Soccotrine Aloes,.....	1 ounce.
Black root,.....	1 do.
Blood root,.....	$\frac{1}{2}$ do.

Pulverize the articles separately, and mix well.

Dose.—A teaspoonful in two portions, half an hour apart.

Use.—This preparation may be regarded as a common cathartic, to be used as occasion requires. It is well adapted to intermittent and bilious fevers, jaundice, headache, liver complaints, dropsy, colic, &c. This will ever prove itself an excellent cathartic, seldom griping the bowels.

Like the above, this is safe with respect to food or drink.

BEACH'S COMMON PURGATIVE.

Take of Jalap root, ...	1 pound.
Alexandria senna,.....	2 pounds.
Cloves,.....	2 ounces.

Let these articles be separately pulverized; then mix them together, and pass through a fine sieve.

Dose.—A teaspoonful. It should be put into a teacup, with a lump of loaf sugar, and a gill of boiling water added; given to the patient when cool, fasting, or on an empty stomach.

Dr. Beach speaks of this as follows:—"This forms the best general purgative that is known. It combines power with mildness of action, and acts through the whole alimentary canal, cleansing it, and producing a healthy action. It may be given to every age and sex; it removes offensive accumulations from the bowels without bringing on subsequent constipation; and it stimulates every contiguous organ to a healthy state. It is useful in all diseases where physic is required. It is very valuable in bilious and febrile diseases. The articles must be genuine. I have seen it made so bad that I could not recognize it. Gruel alone to be drank during the day the above is taken."

NERVINE TONIC.

Take of Sculpap leaves,.....	1 pound.
Lady's slipper,.....	1 do.
Ginseng root, ...	$\frac{1}{2}$ do.

The above articles are to be well pulverized and mixed.

Dose.—One teaspoonful in hot water sweetened.

Use.—This forms an active tonic for the nervous system,

and is very useful in all cases of nervous weakness, palsy, subsultus tendinum or muscular twitching, delirium tremens, epilepsy and other fits, locked-jaw, &c.

ASTRINGENT TONIC COMPOUND.

Take of Bayberry.....	2 pounds.
White pond lily (<i>root.</i>)	1 pound.
Witch hazel (<i>leaves.</i>).....	1 do.
Hemlock, or white Oak (<i>inner bark.</i>)	1 do.
Geranium (<i>cranes bill.</i>).....	1 do.
Birchroot	1 do.

All made fine and mixed.

Dose.—One ounce, scalded in a pint of boiling water, strained and sweetened, may be drank freely, as occasion may require.

Use.—This is one of the most valuable preparations in the book, its use being very extensive. Emetics are generally mixed up in a tea of this article, and enemias are frequently made of it. As a wash for ulcers, cancers, and scald head; and as an injection for bleeding from the bowels and womb, and for gonorrhœa, leucorrhœa, &c. it cannot be exceeded. A strong tea made of this article and drank freely, will most generally restrain nearly all kinds of hemorrhages, especially if there is combined with it a suitable portion of cayenne pepper. It is very good in diabetis, and after the bowels are cleansed, in dysentery; and when the water is removed in dropsy, it is good to use a strong tea of this article to brace up and compact the solids, so as to prevent the re-accumulation of it. It likewise makes a very good wash for canker in the mouth and throat; and the powder forms a very good pultice for many purposes.

BITTER TONIC.

Take of Poplar bark.....	1 pound.
Dogwood bark.....	1 do.
Bayberry.....	1 do.
Golden seal.....	1 do.
Colombo root.....	1 do.
Cloves.....	6 ounces.
White Sugar.....	5 pounds.

All to be finely pulverized separately, and well mixed.

Dose.—A teaspoonful is to be taken in any way the patient wishes, three times a day.

Use.—This preparation is intended to tone up and strengthen the system, after the force of the disorder is broken up by

the use of the other medicines. The bitter tonics are very good to be occasionally used by persons of weak and lax habits, especially in the spring of the year. The bitters generally promote the appetite.

THOMSON'S SPICED BITTERS.

Take of fine poplar bark, one pound, balmony seven ounces, bayberry four ounces, ginger four ounces, cayenne one ounce, cloves three ounces, golden seal three ounces, sugar two pounds, and let them be well mixed.

Use.—Put a tablespoonful of this compound with four ounces of sugar, into a quart of boiling water. Take a wine-glassful of this three times a day, before eating. A teaspoonful of these powders, with one of sugar, may be taken in a cup of hot water; or an ounce may be scalded in half a pint of hot water, and put into a quart bottle, which may be filled with good Malaga wine. Prepared in this way, it is an excellent bitter for weak patients.

LAXATIVE BITTERS.

Take of Yellow parilla,.....1 pound.
Bitter root,.....1 do.
Wild cherry bark,..... $\frac{1}{2}$ do.

Pulverize, and mix with two pounds of fine white sugar.

Dose.—A teaspoonful three times a day before eating.

Use.—In dyspepsia, habitual costiveness, feverish habits, loss of appetite, in slow recoveries from fevers, &c., this will be found a very good article.

WOMAN'S FRIEND.

Take of Poplar bark,.....5 pounds.
Star root, ... $\frac{1}{2}$ pound.
Cinnamon bark, ... $\frac{1}{2}$ do.
Cloves, ... $\frac{1}{4}$ do.
Golden seal, ... $\frac{1}{2}$ do.
Cayenne pepper, ...4 ounces.
White sugar,.....8 pounds.

All made fine and well mixed.

Dose.—One teaspoonful is to be taken in a gill of hot water.

Use.—This is an excellent article for female weakness.

EXPECTORANT POWDER.

Take of Skunk Cabbage	1 pound.
Indian Turnip	$\frac{1}{2}$ do.
Blood root	$\frac{1}{4}$ do.
Lobelia (<i>brown</i> .)	$\frac{1}{4}$ do.

All to be pulverized very fine and well mixed.

Dose.—A teaspoonful in honey or molasses three times a day or oftener, if necessary.

Use.—To promote expectoration or the discharge from the lungs in asthma, inflammation of the lungs, pleurisy, whooping-cough, croup, consumption, and colds, this is an invaluable remedy.

ERRHINE POWDER.

Take of Bayberry, ...	2 ounces.
Lobelia (<i>green</i> .)	$\frac{1}{2}$ ounce.
Wild ginger	1 do.

Pulverize very fine, and drop on it a teaspoonful of the oil of golden rod or burgamot, and mix thoroughly, and keep in tightly stopped bottles.

Use.—This makes a very good snuff to remove stoppages in the nasal fossa, by means of sneezing; and will likewise relieve the head when stopped from catarrh or cold.

II. INFUSIONS.

These are very simple preparations, and are generally made at the time they are intended to be used. This way of preparing medicine is alike popular and ancient, and is one of the best forms in which medicine can be taken, at least those kinds which will give out their virtues to boiling water. Infusions consist of nothing more than teas, and this hint will preclude the necessity of giving many examples or formulas. As a general thing infusions may be made by putting a handful of the article or articles, intended to be used, into a teapot or large bowl, and throwing on boiling water enough to cover it; unless otherwise directed this may be the way to make the preparation whenever an infusion is ordered. As a general thing, they may also be drank freely, without reference to exact quantities unless this is mentioned.

DEMULCENT INFUSION.

Take of flaxseed, half an ounce, liquorice root, bruised, two drachms, boiling water, a pint, and macerate for four hours in a covered vessel, and strain.

Use.—Very good in inflammatory affections of the throat, and the mucous lining of the lungs, urinary passages, and bowels.

ANTHELMINTIC INFUSION.

Take of carolina pink, senna, and loaf sugar, half an ounce each; add a little milk, and scald in a pint and a half of boiling water. A half an ounce of manna is sometimes also added to the above ingredients.

Use.—This is a popular remedy for worms. The whole of the infusion should be drank, unless it should operate freely with less—taken in the course of two days.

EMMENAGOGUE INFUSION.

Take of black cohosh, motherwort, water-pepper or smartweed, of each one ounce; pour on warm water enough to cover, and strain.

Use.—It may be drank in half teacupful doses, three or four times a day, till it affects the head, when less must be taken, until it has the desired effect. If a teaspoonful of the tincture of myrrh is added to each dose, it makes it act much more promptly. This is an excellent emmenagogue.

III. DECOCTIONS.

Decoctions are made by boiling substances in water for some time, with a view to extract such properties that are not readily obtained by simple infusion. The process should be conducted in a covered vessel, so as to confine the vapor on the surface of the liquid as much as possible, and thus also prevent the access of atmospheric air, which is sometimes apt to exert a pernicious agency over the medical substances, in this state of elevated temperature.

Articles subjected to this mode of preparation must be dis-

criminate selected; for there are many which, although, they yield their active and desired medical properties to the water in this process, yet the nature of these properties may be such that their affinity for the water may be overcome by the gravity of the atmosphere, and thus they may escape. The examples of those articles are the various mints, and all articles whose active properties consist in an essential oil; they, therefore, must not be boiled, but they may be used in the form of infusion; or they may be distilled. Some ingredients, also, yield their properties with less boiling than others. In the process of making decoctions, therefore, such articles as need the most boiling should be put into the kettle first, and the rest added according to the amount of boiling they require, as no article should be boiled longer than is necessary to extract its virtues. The bulbous ingredients, should always be bruised or sliced fine.

As these preparations are all liable to become sour and spoil, they should only be prepared for immediate use.

DECOCTION FOR RHEUMATISM.

Take of Black cohosh.....	1 ounce.
Sickly ash bark	½ do.
Poke berries dried	½ do.
Burdock seeds	½ do.

Bruise, and boil an hour in a quart of water, and strain.

Dose.—A wine-glassful, sweetened, three times a day.

Use.—Few articles will be found a better internal remedy for rheumatism, sciatica, and gout. While this is used internally, the bathing drops should be used externally.

DECOCTION FOR DROPSY.

Take of the inner bark of sweet elder, the fibrous roots of queen of the meadow, parsley root, dandelion root, and water melon seeds, a handful of each; bruise and boil them one hour in two quarts of water, and filter.

Dose.—A wine-glassful three or four times a day. It may be sweetened.

Use.—This is more particularly intended for dropsies, but is very good for affections of the kidneys and urinary passages. It causes a free discharge of urine.

IV. TINCTURES.

Tinctures are prepared by macerating medicinal substances in spirits; the menstruum most generally used is alcohol.—These preparations are very convenient, as they seldom need any other qualification for use than simple dilution in water or some simple syrup. The time that it is generally necessary for the substances to remain in the solvent for the extraction of their virtues, is two weeks; but if heat be applied, a much shorter time will answer. When tinctures are made, the substances to be used should generally be dry, and either bruised or ground fine; and then put in a glass vessel, and tightly stopped. The vessel should be occasionally shaken up, and when ready for separation, the tincture, after the sediment is settled, may be carefully decanted, or it may be filtered.

TINCTURE OF LOBELIA.

This may be prepared from the green or dry herb, which should be taken (in any quantity,) and after bruising in a mortar, may be put in a glass or tin vessel, and pressed down close, when enough alcohol should be thrown on it to cover the herb; the vessel should then be stoped and put in the warm sun for several days. After this, the liquor may be pressed out and strained. Some add to every gallon of this tincture, a teaspoonful of the oil of sassafras.

Dose.—As an emetic for a child, a teaspoonful should be given in water or a tea of astringent tonic, and repeated every ten minutes till it operates. For an adult this preparation is not strong enough for an emetic. As an expectorant, the dose for a child is from ten to twenty drops, and for an adult from a half to a whole teaspoonful.

Use.—As an emetic, the tincture of lobelia is particularly serviceable in asthma, whooping-cough, croup, inflammation of the lungs, and in pleurisy. As an expectorant, it may be used in all those cases with particular advantage; and is also good in all other cases in which expectorants are indicated. The tincture of lobelia also makes a very good rubefacient, by application to ulcers, inflammations, wounds, bruises, rashes, and poisons of every kind. It is also an active anodyne, perhaps better than any other single article in the materia medica.

SEED.—This makes a very good tincture, possessing

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LOBELIA

the same general properties as that made from the herb, and can be made much stronger. This tincture may be prepared by digesting one pound of finely pulverized seed of lobelia in a gallon of alcohol for five or six days; when the tincture may be decanted. The dregs should be saved, for poultices &c.

Use.—This tincture may be applied to all the purposes for which the above is used, and being much stronger it serves very well as an emetic for adults. This tincture affords a very important ingredient for the *lathing drops*, and *antispasmodic tincture*.

SCUR TINCTURE OF LOBELIA.

This is prepared in the same way as the foregoing, only that in this, instead of alcohol, good vinegar is used. It is better as an expectorant, and as a counter poison, than the alcoholic tincture. This is very good for all bites and stings whose poison consists of an alkaline principle. With the sour tincture prepared from the seed of lobelia the writer has cured a number of cases of hydrophobia.

TINCTURE OF MYRRH.

Take of Gum Myrrh.....1 pound.
Cayenne Pepper.....1 ounce.
Brandy (*fourth proof*).....1 gallon.

Pulverize the myrrh and pepper, and put the whole in a glass or earthen vessel, laced in the hot sun for 8 or 10 days, shaking it occasionally. It may then be left to settle, when the tincture may be decanted. This may be prepared quicker, by putting the ingredients in a stone jug and placing it in a kettle of boiling water, and thus leaving the spirit to boil for 15 minutes, stirring the ingredients occasionally with a stick.—To conduct the process safely, the jug should be left unstopped to give exit to the vapor.

This is Dr. Thomson's celebrated No. 6. or Rheumatic drops, so highly esteemed as a family medicine by all who are acquainted with it.

DR. JOHN THOMSON'S IMPROVED NO. 6.

Macerate for several days in one gallon of high cherry spirits, one pound of gum myrrh, four ounces of golden seal, four ounces of bayberry, one ounce of cayenne pepper, all made fine. Pour off the tincture and bottle for use.

COMPOUND TINCTURE OF MYRRH.

A very good and cheap article of this kind may be made by preparing a menstruum to be used instead of the brandy, in the following manner;—Digest for several days, in a gallon of alcohol, one pound of bruised peach meats, or what is better, two pounds of dried wild cherries, pounded fine; let the dregs settle, and throw off the liquor.

Take the liquor or brandy, thus obtained, and digest in it for one week, 12 ounces of good gum myrrh, two ounces of prickly ash berries, one ounce of fine sculcap, and one ounce of cayenne pepper, all made fine. After the dregs settle, the tincture may be decanted and bottled for use.

Dose.—One teaspoonful or more may be taken at a time and often repeated.

Use.—All the above preparations of *myrrh*, are invaluable compounds, and are justly entitled to a high station, in the phalanx of botanico medical agencies. They are all powerfully antiseptic, stimulant, and tonic; very useful in typhus and scarlet fevers, dysentery, mortification, rheumatism, and colds. This tincture is good to relieve pain, and even severe colic is sometimes entirely relieved by it alone. It is very good to be used by injection with a tea of the astringent tonic, in all cases when mortification of the bowels is apprehended. As an external application, it is excellent in scald head, eruptions of the skin, bruises, cuts, sprains, neuralgia, rheumatism, and gout. For fistulous, scrofulous, and venereal ulcers, it, with lobelia tincture, makes an excellent injection.

ANTISPASMODIC TINCTURE.

Take of Lobelia tincture, (<i>prepared from the seed</i>),	 1 pint.
Tincture of myrrh,	 1 do.
Nervine tincture,	 1 do.

Mix.

Dose.—One teaspoonful or more, to be repeated as often as may be necessary.

Use.—This is an excellent antispasmodic, very useful in all cases of fits or spasms, tetanus, hydrophobia, neuralgia, colic, cholera, delirium tremens, suspended animation, palsy, erysipelas, dropsy, &c.

NERVINE TINCTURE.

Take of Sculcap (<i>leaves dried</i> ,).....	1 pound.
Lady's slipper	1 do.
Ginseng	$\frac{1}{2}$ do.
Alcohol	1 gallon.

Pulverize the dry articles, and digest in the alcohol for a week or ten days, in warm sun heat, shaking it up occasionally.—Pour off the tincture, and add a teaspoonful of the oil of anise.

Dose.—A small tablespoonful of this may be taken at a time, but less is generally used; this dose may be repeated as occasion may require.

Use.—This is an excellent remedy for nervous weakness, cramps, palsy, neuralgia, fits, tetanus, mania, hysterics, hypochondria, and nervous headache.

V. WATERS.

Several different preparations are made by suspending medicinal substances in water, generally consisting of such as do not contain any saccharine matter, nor any other property that is calculated to impair the preparation by changing the chemical relations of the ingredients. These preparations are known under the appellation of "*waters*."

COLLYRIUM.

Take of Crocus Martus	1 drachm.
Sulphate of zinc	4 scruples.

Pulverize, and digest in a quart of rain water, and filter through paper.

Use.—This is an excellent preparation for chronic sore eyes;—apply it with the finger to the inner angle of the eyes, two or three times a day.

Poisonous minerals have ever been justly rejected by all true Botanical physicians; and few have been more scrupulous in this matter than the writer, and it now affords him satisfaction that it has not been the simple *ipse dixit* of any *man, men, author, or school*, that has brought him in the possession of his present opinions, but that it was the result of ob-

servation and sound *induction*. Now if these would lead him into the practice of fashionable medicine, he would of course follow; but this is impossible. Nevertheless, certain mineral substances have been found very serviceable as external applications. The above preparation has exceeded every thing else as a common eye-water that the writer has ever become acquainted with. It seldom fails of doing some good.

EGG EYE-WATER.

Take the white of six boiled eggs; throw on this, half an ounce of fine white vitriol; chop up fine; mash, and mix the whole well together; put it in a strong piece of cloth and press out the juice.

Use.—This remedy has long since gained considerable credit in the cure of sore eyes;—it is said to cure the cataract.

THOMSON'S EYE-WATER.

“Take of green ozier, the bark, scraped fine, one handful; add half a pint of soft water, about milk warm; let them stand and steep at about the same warmth, for two hours or more; add a piece of pure pearlash, [or salætratus] the size of a large sugar pea, a tablespoonful of refined sugar, and a stem glassful of French brandy; filter through paper, and bottle for use.”

Dr. J. Thomson the son of the original proprietor, adds an equal quantity of ozier infusion, and yellow lily, and uses Jamaica rum instead of the brandy; he adds, moreover, to every two quarts of the water about half an ounce of white vitriol, previously made fine.

EFFERVESCENT DRAUGHT.

Take in a tumbler about a wineglassful of equal parts of lemon-juice and water, and in another, half as much water in which a tablespoonful of white sugar, and 15 grains or about half a teaspoonful of carbonate of soda or potassa is dissolved; pour the contents of one glass into the other and drink as soon as effervescence commences.

Use.—This is diaphoretic, and diuretic, and makes a very good and pleasant drink in fevers. It is also an excellent remedy in scurvy.

COMMON NEUTRAL DRAUGHT.

Take of Soda..... $\frac{1}{2}$ teaspoonful.
 Tartaric acid $\frac{1}{2}$ do.

Dissolve each separately in a tumbler about one third full of water: there may be mixed with the soda two teaspoonfuls of white sugar, and when all is dissolved, the contents of one glass is to be thrown into the other, and the mixture drank as soon as the effervescence commences. It depends entirely upon the relative proportions, whether the mixture will effervesce well, and as the purity and strength of the ingredients may differ much, it is hard to give a correct formula; but experience will soon enable all to make it readily.

Use.—This is an excellent beverage in fevers.

 VI. EXTRACTS.

Extracts are made in several ways; most commonly they are prepared by evaporating the decoction, made in the usual way, down to the proper consistence, by means of heat.—Another way to obtain extracts, is to evaporate the tincture prepared with alcohol. On account of the smallness of the dose necessary in the use of extracts, they make a very convenient form of administering medicine. Great care is necessary in evaporating the liquids, least they should be burned, and thus rendered useless. When the liquor becomes somewhat thick, it is best to put it in a small vessel, which may then be placed in a kettle of water and thus reduced to the proper consistence by boiling; or the vessel may be placed in a sand bath. Bottles containing extracts should have a piece of bladder or skin tied over them to prevent the preparation from moulding.

EXTRACT OF WHITE WALNUT.

Take of the inner bark of the root, or trunk of the butter-nut tree any quantity; put it into a kettle, and pour on enough clean soft water to cover it, boil until the strength is extracted, then strain and, after cleaning the kettle, put it back and evaporate to the consistence of thick molasses. At this stage, as much as is wished to be used for the purpose of making

pills may be taken out. To as much of this as is wished to be used in the liquid form, there may be added to every gallon one quart of good sugar house molasses, and one pint of West India Rum, and well mixed.

Dose.—One tablespoonful.

Use.—This is a very mild, but efficient cathartic. Dr. J. Thomson in speaking of it says:—"I first used this compound in Montreal, in cases of cholera in 1832, and was well pleased with its lively, searching and stimulating effects, as it would start a moisture in the palms of the hands in a very few minutes, relieving all pains, and cramp, in the extremities."—This extract is a very good preparation for children, for as its taste is not unpleasant they are generally more ready to take it than many other medicines of this class. But aside from this, it seems, in its properties, well adapted for children; it relieves colic pains, removes worms, and is very good to prevent that unnatural bloated appearance of the bowels that is common with some children. This preparation is good in nearly all cases in which cathartics are indicated, but should never be long continued at a time, as the system is apt to become accustomed to its use, and will make it necessary to take very large doses.

DOCK EXTRACT.

Take of the clean roots of the narrow leaved dock, any quantity; slice them up, and boil them in a kettle with equal parts of alcohol or whisky and water, until its virtues are extracted; strain the fluid, and boil down carefully until it assumes the consistence of soft soap, when it must be further evaporated to the consistence of a thin plaster, by means of shallow dishes placed in the warm sun heat.

Use.—This, formed into pills with the extract of dandelion, and mandrake in equal parts, makes perhaps the best antiscorbutic cathartic known; and as such, the dock extract is very good even alone. The dose of this or of the compound, is from two to four common sized pills. This is an excellent article for internal use in the cure of all scrofulous complaints, and for a morbid state of the secretions. It also makes an excellent external application in all bad ulcers, which it cleanses and heals very rapidly. Combined with Thomson's extract of clover it improves his cancer plaster.

EXTRACT OF OAK BARK.

The extract made by evaporating the decoction of either

the white oak, black oak, red oak, or chestnut oak bark, makes a very good astringent, which may be successfully applied to ruptured membranes, as in the case of openings between the fibres of the abdominal muscles, so common in children. It is also good to apply to some ulcers, and is always good to be used in the form of a plaster over joints that are much disposed to luxation. It is very good to be applied as a styptic to bleeding surfaces; and by dissolving it in hot water, it may be used internally in all cases in which astringents are indicated.

EXTRACT OF MANDRAKE.

Digest two pounds of fine mandrake root in a gallon of alcohol for one week, stirring it occasionally; then add two quarts of water; put the whole into a kettle; boil two hours and strain, then evaporate to the consistence of syrup; when it must be put into another vessel and evaporated to the thickness of honey. Now mix with every pound of this, one ounce of cayenne pepper, and one ounce of sculcap, very finely pulverized, and form into pills.

Use.—This is one of the best cathartic pills that can be made, operating mildly and slowly, but with certainty. It seems eminently adapted to the new views in medicine, as it invigorates and stimulates the system, instead of prostrating it, as many cathartics do. Those who take it will find that when it is done operating, they will feel relieved, and free, as it operates very prominently on the secretory and excretory systems, evacuating and stimulating as it goes. Used as a plaster, it is good to cure cancers, and kings evil.

EXTRACT OF DOGWOOD.

An extract of the inner bark of dogwood may be made in the same way that the extract of mandrake is prepared, adding the pepper and sculcap likewise.

Use.—This is an excellent tonic, and seldom fails of curing the *intermittent fever*, if its use is preceded with an emetic, and a cathartic of the anti-billious pills. It may be used in pills, two of which may be given two or three times a day.

VII. OILS.

Oils are generally divided into two classes; the "*fixed*," or *expressed*, and the "*volatile*" or *essential*, so named from their respective characteristics in relation to the vaporizing influence of heat. Substances possessing the characteristics of oil, are furnished us by the *vegetable*, *animal*, and *mineral* kingdoms. The vegetable kingdom, for example, furnishes such as the linseed, castor, olive, and the various essential oils; the animal kingdom the spermaceti, and lard oils; the mineral kingdom the petroleum or bitumens, found at Amiano in the Duchy of Parma, at Gabian in France, upon the borders of the Caspian Sea, in the kingdom of Ava, and in Barbadoes, Trinidad, and other West India Islands, as well as in the United States, on the Kenhawa in Virginia, in Kentucky, western Pennsylvania, Ohio, and on the shores of Seneca Lake in New York. That which is obtained in the latter place, has received the name of the lake, and is hence called "*Seneca Oil*." As nearly all the oils used in medical practice, can be bought of the Apothecary cheaper than they can be made on a small scale, the mode of the preparation of only a few will here be given.

OIL OF LOBELIA.

Take of lobelia seed, finely pulverized, six ounces; put it into a tincture bottle, and pour on it one quart of sulphuric æther; stop it up, and let it stand for five or six days, shaking it occasionally; after which let it settle, and throw off the tincture and filter; put the tincture into shallow vessels placed in the sun h at, and let it evaporate. As the tincture begins to thicken, it may be thrown together into one of the vessels to prevent the loss of what would otherwise adhere to the vessels. When the æther is evaporated, an impure oil of the lobelia remains.

Dose.—As an emetic, from eight to ten drops are sufficient; as an expectorant, two or three.

Use.—The oil of lobelia contains all the active properties that any of the other preparations of this article do, and has at the same time, the advantage of the smallness of the dose required.

OIL OF CAYENNE PEPPER.

The oil of cayenne pepper may be obtained in the same way that the oil of lobelia is made; but may be manufactured somewhat cheaper, by tincturing it in alcohol instead of the æther, and evaporating it by a slight heat from a water or sand bath; or it may be put in a tin pan or cup, which may then be set on a brick, placed on a hot stove, and thus evaporated.

Use.—This, like the oil of lobelia, possesses all the virtues of the article from which it is obtained, and being so much concentrated, will serve purposes that are not so easily accomplished by the more crude preparations of pepper. It is, for instance, much better as a rubefacient. It is very good in sciatica, lumbago, rickets, white swellings, palsy, &c.

VERMIFUGE OIL.

Take of Castor oil, ... 1 pint.
 Worm seed oil, ... 2 ounces.
 Oil of anise, ... 1 ounce.

Mix well.

Dose.—One teaspoonful to a child two years old, three times a day for several days, when, if it does not operate, a dose of white walnut extract must be given.

Use.—It is very good to expel worms.

ANTHELMINTIC OIL.

Take half a pound of Carolina pink root; pulverize, and put it in a suitable bottle; pour on a quart of sulphuric æther, and digest for a week; pour off the tincture and evaporate in the same way you do to obtain the oil of lobelia. When of the thickness of molasses, mix well with a pint of castor oil.

Dose.—A tablespoonful for an adult, taken in the morning, at noon, and at night, fasting; for a child, half as much is a dose. If it does not operate, give a dose of the white walnut extract, the following day.

Use.—This is a very good vermifuge, and is safe in its use.

VIII. ESSENCES.

These preparations are made by dissolving the essential oils in alcohol, in the proportion of from one to two ounces of the former to a pint of the latter. Many of them are very good medicines.

ESSENCE OF PEPPERMINT.

This is a stimulant, carminative, and diaphoretic; useful in fevers, flatulency, nausea, colic, and other pains in the stomach and bowels.

Dose.—A teaspoonful, in water, sweetened.

ESSENCE OF SPEARMINT.

As an antiemetic, the spearmint is a good article, generally relieving nausea in a short time. It is moreover a good anthelmintic or worm medicine; and may also be used for all the purposes for which the peppermint is beneficial.

Dose.—A teaspoonful on sugar.

ESSENCE OF JUNIPER.

Essence of Juniper is a very good diuretic, and carminative; good in dropsy, inflammation of the kidneys, and stoppage of water generally; also good for pain in the stomach and bowels.

Dose.—A teaspoonful, taken in any way.

ESSENCE OF CINNAMON.

This is sometimes used as medicine, and may be regarded as a stimulant, diaphoretic, carminative, and rubefacient; useful in colic pains, pain in the stomach, and in dysentery.—The dose is from 20 to 30 drops.

IX. CONSERVES AND CONFECTIONS.

These are preparations in which medicinal substances are incorporated with saccharine matter, with a view either to their preservation, or more convenient administration.

CONSERVE OF HOLLYHOCK.

Take of Hollyhock flowers, (<i>the petals</i> ,).....	2 pounds.
White sugar, (<i>pulverized</i> ,).....	4 do.
Poplar bark,.....	2 ounces.
Bay berry,.....	2 do.
Golden seal,.....	2 do.
Cloves,.....	2 do.
Cinnamon,.....	2 do.
Bitter root,.....	2 do.
Cayenne pepper,.....	2 do.
Oil of wintergreen, or pennyroyal,.....	4 ounce.

Beat the flowers to a jelly, in a mortar; add the sugar, and beat again until thoroughly mixed, then add all the other ingredients, well pulverized; knead, and work till perfectly mixed.* This is to be kept in a close vessel; or it may be rolled into cakes and dried.

Use.—This is an excellent stimulating tonic,—useful in dyspepsia, jaundice, loss of appetite, sore throat, &c. It stimulates and invigorates the system, and promotes its various functions. It may be carried in the pocket, and eaten in small portions at libitum, or whenever necessary.

LENITIVE ELECTUARY.

“Take of senna, *eight ounces*; coriander seed, *four ounces*; liquorice root, bruised, *three ounces*; figs, *one pound*; pulp of prunes, pulp of tamerinds, pulp of purging cassia, each, *half a pound*; refined sugar, *two pounds and a half*; water four pints. Rub the senna and coriander together, and separate ten ounces of the powder with a sieve. Boil the residue with the figs and liquorice root, in the water, to one half; then press out the liquor and strain it. Evaporate the strained liquor by means of a water bath, to a pint and a half; then add the sugar and form a syrup. Lastly, rub the pulps gradually

*Should the hollyhock mucillage not be sufficient to form a dough with the ballance of the ingredients, a suitable quantity of slippery elm mucillage may be added, and when the hollyhock cannot be obtained at all, the elm mucillage will answer in its stead.

with the syrup, and having thrown in the sifted powder, beat the whole together till they are thoroughly mixed.”—*U. S. Dispensatory*.

The pulp of cassia is obtained by boiling the bruised pods in water, straining the decoction, and evaporating to the consistence of an electuary. The pulp of prunes, may be prepared by boiling the fruit in a small quantity of water to soften it, then pressing it through a hair sieve, and evaporating to a proper consistence. The tamerinds; should they be too dry for use, may be treated in the same way.

Use.—The *lenative electuary*, is one of the best and most pleasant laxatives,—eminently adapted to costive habits. In the use of this preparation individuals may perhaps be said to take medicine by way of luxury. The dose is from a teaspoonful to a tablespoonful.

CONSERVE OF ROSES.

“Take of red roses, unblown, *a pound*, refined sugar *three pounds*. Bruise the roses, then, gradually adding the sugar, beat the two together till they are thoroughly mixed.

Use.—This is a very good article in which to take such medicines as are disagreeable to the taste; it is slightly astringent, but is not very valuable as a medicine taken alone. It is sometimes used in making up batches for pills.

X. SYRUPS.

Syrups are fluid preparations in which sugar or some other saccharine substance is combined with vegetable infusions, decoctions, expressed juices, fermented liquids, or simple watery solutions.

The vegetables are generally boiled until their strength is extracted, and the watery portion considerably evaporated, when the liquid is separated, strained, and a sufficient quantity of refined sugar added to preserve the preparation.

In making syrups it is best to add a little spirits to the water; or what is better still, to the herb before the water is applied, in all cases when such articles are used in the syrup, which do not yield their virtues so readily to water as to alcohol. The spirit thus added will not change the character of

the compound, so far as the existence of the former is concerned, as it is generally driven off in the process of the evaporation.

ALTERATIVE SYRUP.

Take of Sarsaparilla	3 pounds.
Narrow-leaved dock root	3 do.
Dandelion root.....	2 do.
Black alder bark.....	2 do.
Guaiacum shavings	2 do.
Burdock root, or seeds.....	2 do.
Sassafras bark of the root.....	2 do.
Mandrake root.....	2 do.

Boil in equal parts of whiskey and water sufficient to cover the ingredients in the kettle, for two hours; strain and boil down to half the quantity; add half a pound of clarified sugar to every pint of syrup; bottle up and keep in a cool place.

Dose.—A half a wineglassful three times a day.

Use.—It is hardly possible to find a better alterative medicine than this, and it is certain that all who observe its effects in venereal diseases, scrofula, consumption, and many cutaneous diseases, must admire it.

DR. J. THOMSON'S STIMULATING PHYSIC.

Take of mandrake root and white walnut bark, each half a pound; bruise well in a mortar, and boil in half a gallon of soft water, down to a pint; strain off and press the dregs.—Add equal quantities of molasses and fourth proof Jamaica Rum; put it in a glass bottle and shake it well together; stop it tight, and it is fit for use.

Dose.—One tablespoonful.

Use.—The Doctor recommends this as a cathartic which will operate without pain, and as a medicine of great value in costive habits, colics, and distress in the head, when it is caused by constipation of the bowels.

THOMSON'S SYRUP OF PRICKLY ASH BERRIES.

Take prickly ash seed and peach meats, of each two ounces; pulverize and put into one pint of fourth proof Jamaica Rum, and add loaf sugar sufficient to make it of the consistence of molasses. This he says is one of the best remedies for syncope or faintness used in the Thomsonian practice.—He does not say how much should be given at a dose, but the strength of the compound will admit of taking a tablespoonful or more.

EXPECTORANT SYRUP.

Take of Wild cherry bark	2 pounds.
Spignet root.....	1 pound.
Pleurisy root	1 do.
Black cohosh root.....	$\frac{1}{2}$ do.
Blood root	$\frac{1}{4}$ do.
Liquorice root	$\frac{1}{4}$ do.
Elacampane.....	$\frac{1}{2}$ do.

Bruise, and boil in a sufficient quantity of water and whiskey, (equal parts) to cover the whole in the kettle, until the strength is extracted, or for about two hours; strain off the liquid, and boil down to half the quantity, and add to every quart, two ounces of skunk cabbage root, and one ounce of Indian turnip root, all very finely pulverized. Now take to every quart of this, three ounces of good tincture of lobelia, and dissolve in it one ounce of oil of annise, to every pint of the tincture and add this to as much good sugar house molasses as there is syrup; mix to every quart of this molasses; two ounces of balsam of tolu, dissolved in half a pint of hot alcohol. Now add the whole together; mix well, and put it into a jug in a cool place.

Dose.—From a teaspoonful to a tablespoonful, often repeated.

Use.—This is one of the best medicines for pulmonary diseases that can be made; it brings on a copious expectoration, and keeps it up. It is likewise very healing to the lungs. It is particularly useful in all cases of consumption, pleurisy, bad colds, asthma, whooping-cough, &c.

DR. J. THOMSON'S REMEDY FOR COUGH.

Take four ounces of flax seed, well pulverized, and two ounces of fine liquorice root; pour upon the ingredients one quart of boiling water, and place it over a quick fire; let it boil for 20 minutes; strain off: press the grains or drags; then add half a pound of good honey, and half a pint of pure lemon syrup; simmer over a slow fire for ten minutes; skim it; set away and let it cool. Then add half a drachm, (a half teaspoonful) of cayenne pepper, one gill of tincture of lobelia, and half a pint of fourth proof Jamacia Rum; shake together and bottle for use.

Dose.—A tablespoonful.

Use.—Good for irritation in the lungs, for colds, asthma, croup, and difficulty of breathing.

SYRUP OF RHEUBARB.

Take of rheubarb root two pounds, wild cherry bark one pound, all made fine; boil in a gallon of water, down to a half; strain, and add brandy in which is dissolved half an ounce of oil of wintergreen, one pint, and two pounds of loaf sugar. Keep it in a cool place.

Dose.—A wineglassful, often repeated, till relief is obtained.

Use.—This is an extraordinary remedy in dysentery.

CHOLERA SYRUP.

Under this name is known the preparation so popular in the treatment of the spasmodic cholera in the United States. The name is still continued, although it is more proper to name medicines after their properties or ingredients, than the diseases for the cure of which they are used.

Take of Lady's slipper root,.....	8 ounces.
Bayberry, ...	8 do.
Golden seal,.....	4 do.
African cayenne, (best,)	1 do.

Pulverize, and boil together the above ingredients, until their strength is extracted, in a sufficient quantity of water to make one gallon of the decoction; then strain and add:—

Best fourth proof West India rum,.....	1 gallon.
Good sugarhouse molasses, ...	1 do.
Tincture of myrrh, ...	1 do.

Mix, and bottle for use.

Dose.—One tablespoonful, three or four times a day; or oftener, as circumstances may require.

Use.—To relieve the stomach and bowels in cholera and cholera morbus, as well as cholera infantum, it is an invaluable remedy. It is likewise good in dysentery, colic, dyspepsia, &c.

THOMSON'S STRENGTHENING SYRUP.

Take one pound each, of poplar bark and bayberry; boil them in two gallons of water; strain off and add seven pounds of sugar; then scald and skim it. Then mix with it half a pound of peach meats and as much cherry stone meats, pulverized. When cool, add a gallon of good brandy, two ounces of caraway seed, pulverized, and one ounce of cayenne pepper.

Use.—Valuable in weakness of the digestive organs; also in dysentery, and cholera morbus. The dose is a wineglassful.

XI. BALSAMS.

Balsams, strictly speaking, are the products of vegetables, either exuded spontaneously, or from *wounds* or incisions made in the plant or tree. The number of natural balsams now known is five, embracing B. Peru, B. Tolu, B. Benzoin, *solid* styrax or storax, and liquid styrax. There are, however, many preparations known in pharmacy under the name of *balsam*, which are compounds so formed as to exhibit the appearance, smell, and consistence of the natural balsams: these are called artificial balsams. Examples of the latter only, are here intended to be given.

BALSAM OF WILD CHERRY.

Take of the inner bark of wild cherry, any quantity; boil in a suitable quantity of whiskey, for three hours; strain, and evaporate to the consistence of tar; then add to every pint of this, two ounces of the tincture of Tolu balsam, and mix well. Then take as much honey as there is of this compound, and incorporate well, adding to every pint, a half ounce of oil of anise, and one and a half ounces of tincture of lobelia.

Dose.—A teaspoonful or more, three or four times a day.

Use.—The balsam of wild cherry, is an excellent medicine for the lungs,—very useful in consumption, pleurisy, coughs, colds, and asthma.

BALSAM OF HOARHOUND.

This may be made by treating the herb in the same way that the bark of the wild cherry is used, in making balsam, leaving out the Tolu.

The dose and use of this are the same as those of the balsam of Tolu.

XII. MUCILAGES.

These are bland, viscid, watery solutions of vegetable matter; designed in practice, to lubricate irritated surfaces, and as a drink in affections of the alimentary canal and urinary organs. They are also used in making pills.

MUCILAGE OF SLIPPERY ELM.

Take of slippery elm bark, fine, one tablespoonful; pour on a quart of boiling water; let it stand until a thick mucilage is formed.

Use.—This is good in many diseases, especially in cases of inflammation of the stomach and bowels; also in dysentery. It may be drank freely.

MUCILAGE OF GUM ARABIC.

Take of Gum arabic, ... 1 ounce.
Boiling water, ... 1 teacupful.

Pulverize the gum, and rub it gradually in the water until it is all dissolved.

Use.—This mucilage, in its medical properties, is very much like the above and may be used for the same purposes.

MUCILAGE OF FLAXSEED.

Take of flaxseed one ounce, and throw on it one pint of boiling water; let it stand for an hour or two.

Use.—This is exceedingly serviceable in asthma, inflammation of the lungs, stomach, bowels, kidneys, bladder and urethra; also for scalding of the urine.

MUCILAGE OF THE PITH OF SASSAFRAS.

Take of the pith found in the young shoots of sassafras, and soak it in cold water, for several hours.

Use.—Good for inflamed eyes.

XIII. PILLS.

ANTIBILIOUS PILLS.

Take of Mandrake root,.....	2 ounces.
Succotrine Aloes,.....	1 ounce.
Blood root,.....	$\frac{1}{2}$ do.
Cayenne pepper, ...	2 drachms.
Lobelia seed,.....	1 drachm.

Pulverize the above articles very fine, separately; mix them well, and pass them through a fine sieve. Mix up with the white walnut extract and make into pills.

Dose.—From four to six.

Use.—These pills will do all the good that calomel will, and are at the same time entirely safe. They are especially useful in bilious remittent fever, fever and ague, jaundice, bilious colic, inflammation of the liver, dropsy, and sick-headache.

NERVINE TONIC PILLS.

Take of Sculp leaves,.....	1 ounce.
Valerian, ...	1 do.

Pulverize, and mix into pills with molasses.

Dose.—Three to six.

Use.—If a dose of these pills is taken twice a day for a long time, they will be found very servicable in the shaking palsy, St. Vitus dance, and all nervous weakness. For more prompt action, they should be made of the extracts of those articles.

TONIC PILLS.

Take of Extract dogwood, ...	two parts.
Extract thoroughwort, ...	one part.
Cayenne pepper, ...	a fourth part.

Mix, and form into pills.

Dose.—From two to four, three times a day.

Use.—These pills are excellent in the treatment of intermittent and remittent fevers, and in all cases of debility and loss of appetite.

LAXATIVE PILLS.

Take of Bitter root, ...	2 ounces.
Gentian, ...	1 ounce.
Extract of yellow parilla, ...	$\frac{1}{2}$ do.
Bird pepper, ..., ...	$\frac{1}{4}$ do.

Pulverize the dry articles, and mix with the extract, adding enough molasses to form into a mass of proper consistence; then form into pills.

Dose.—From one to four, three times a day.

Use.—Few articles are more servicable than these pills, in habitual constipation, indigestion, headache, loss of appetite, jaundice. &c.

BEEF'S GALL PILLS.

Take of beef's gall that has dried in the cyst or bladder to a proper consistence; add one fourth part of bird pepper and form into pills.

Dose.—From two to four.

Use.—This is a cathartic that is, perhaps, more congenial in its operation on the human body, than any other preparation now known. It is especially useful in bilious colic, constipation, and some chronic diseases of the intestines.

CHAPTER III.

DISPENSATORY.

In dispensing medicines, as well as in compounding, it is necessary to have a knowledge of means by which definite quantities may be taken, and estimated, as by measure and weight. Several scales are now in use by the apothecaries of our country: for compounding medicines, the U. S. Dispensatory directs the use of the troy weights, and the avoirdupois for buying and selling.

I. TABLES OF WEIGHTS.

APOTHECARIES' WEIGHT.*

20 grains (<i>gr.</i>)	make	1 scruple,	marked	scru.
3 scruples		1 drachm,		dr.
8 drachms		1 ounce,		oz.
12 ounces		1 pound,		lb.

AVOIRDUPOIS WEIGHT.

16 drachms (<i>dr.</i>)	make	1 ounce,	marked	oz.
16 ounces		1 pound,		lb.

II. TABLE OF MEASURES.

APOTHECARIES' OR WINE MEASURE.

4 gills (<i>gls.</i>)	make	1 pint,	marked	pt.
2 pints		1 quart,		qt.
4 quarts		1 gallon,		gal.

III. WEIGHTS OF FLUID MEASURES.

As there is much difference in the sizes of spoons and other utensils in domestic use, which are often used as graduates in administering to the sick, a table showing their respective weights may not, therefore, be altogether useless.

A teaspoonful is about equal to one fluid drachm, or about 60 drops.

A tablespoonful is very nearly equal to five fluid drachms.

A wineglass will contain about two fluid ounces.

A teacup will contain about four fluid ounces.

A pint is very nearly equal to a fluid pound.

It will be observed that the above table is made out according to the weight and measure of water, and that many medical fluids may differ somewhat from this table, according to their density. This must rather be considered as an example of the average and comparative sizes of domestic utensils.

*Apothecaries' weight is the same as troy weight, only having different divisions between the grains and ounces: the latter embracing the *pennyweight*, which contains 24 grains,—20 of which make an ounce.

IV. TABLE OF DOSES.

Whereever a dose is mentioned in this work, unless otherwise directed, it is intended to be understood that for an adult. Females generally require about one fourth less than males.

The dose for a child ten years of age, is, as a general thing, half the quantity that is proper for an adult.

The dose for a child two years old, is about half the quantity proper for one of ten years of age.

The dose for an infant should be about half that which is proper for a child two years of age.

It is to be observed that in those individuals that are much in the habit of taking medicines, the organs become accustomed to their action, and that when an article has been taken for several weeks or more, the dose must be increased to insure its good effects.

GLOSSARY,

OR

DICTIONARY OF MEDICAL AND BOTANICAL TERMS USED IN THE WORK.

- Abdomen.** The belly.
- Abscess.** A tumor containing pus, or a collection of matter.
- Abnormal.** Unnatural, irregular.
- Absorbent.** A vessel that absorbs or takes up fluids.
- Acetabulum.** The socket that receives the head of the os femoris or thigh bone.
- Acid.** Sour; that which imparts to the tongue a sharp or sour taste.
- Acrid.** Sharp, burning, or pungent.
- Acoucher.** A midwife, or one that attends in parturition.
- Acuminate.** Taper-pointed; a narrow or linear point.—The point usually inclines to one side.
- Acute.** In botany it means sharp pointed, but less gradually so than acuminate; in pathology the term is applied to diseases which are of short duration, but attended with violent symptoms; it is opposite to *chronic*.
- Albumen.** A viscid animal or vegetable principle, resembling the white of eggs.
- Alkali.** A substance which is capable of uniting with acids and destroying their acidity; among the most common are potash, soda, &c.
- Alterative.** A medicine capable of changing the condition of the system without producing any sensible increase of the evacuations.
- Alveola.** The sockets for the teeth.
- Alvine.** Belonging to the intestines.
- Ament.** Flowers on chaffy scales, and arranged on a slender stalk.
- Amplexacaulis.** Clasping the base of the stem.
- Amenorrhœa.** An obstruction of the menses.
- Anasarca.** Dropsy, of the cellular membrane.
- Anastomose.** Joining together.
- Annual.** Yearly.
- Annulated.** Having a ring round the capsules; as in ferns, &c.
- Anodyne.** That which relieves pain.
- Antacid.** Substances that neu-

- tralize acids; some of the most common are soda, potash, &c.
 Antiseptics. Medicines that guard against mortification.
 Anthelmintics. Medicines which destroy or expel worms.
 Antilithics. Substances which guard against, or remove urinary calculi or gravel.
 Antispasmodics. Medicines which relieve cramps or spasms.
 Aperient. That which gently opens the bowels.
 Apex. The top or summit.
 Articulated. Jointed.
 Ardor. Heat.
 Aroma. Fragrance, scent.
 Aromatic. Sweetscented, fragrant.
 Arthroida. A joint movable in every direction.
 Ascites. Dropsy of the belly.
 Assimilation. The conversion of food into nutriment.
 Astringent. That which corrects looseness and debility, by rendering the solids denser and firmer, known by its puckering effects on the mouth.
 Atony. A state of inactivity.
 Atrophy. A wasting, without any sensible discharge.
 Axillary. Growing out of the axils; leaves or fruits are said to be axillary when they proceed from the angle formed by the stem and branch.
 Biennial. In botany plants are said to be biennial when they are of two years duration, putting forth leaves the first year only, and bearing blossoms and seed the second.
- Bifurcation. The condition of being divided, forked, or parted.
 Bract. Floral leaf; a leaf near the flower which differs from the rest of the same plant.
 Bronchia. The aircells of the lungs.
 Cachexia. A general weak, relaxed, and disordered state, without fever.
 Cadaverous. Deathlike; having the appearance of a dead human body; wan, pale, ghastly.
 Calculi. Small limestones, found in the cavities of the body, as in the urinary and biliary cysts.
 Callus. Bony matter, found about fractures.
 Calor. } Heat.
 Caloric. }
 Calyx. The flower-cup or outer covering of flowers.
 Campanulate. Bell-form.
 Canula. A small tube, usually belonging to sharp instruments designed for removing fluids.
 Capillary. Hair-like; a term used to designate those small vessels found between the terminations of the arteries and the commencement of the veins, and in which the change from arterial to venous blood is effected.
 Capsule. A little seed vessel that opens when the seed ripens.
 Carminative. That which expels wind.
 Cartilage. Gristle; a white

- semi-bony substance.
- Catamenia.** The monthly evacuation peculiar to the female sex.
- Catheter.** A small tube designed for drawing the urine.
- Caudex.** The main root of plants.
- Cautery.** A burning application.
- Cellular.** Containing cells, or cavities.
- Cerebellum.** The lesser brain.
- Cerebrum.** The brain, or anterior and larger portion of the soft mass within the skull.
- Cespitosa.** Turf.
- Chronic.** A term applied to diseases which are of long continuance, and usually without much fever.
- Chordee.** A morbid contraction and curvature of the corpus cavernosum or body of the penis.
- Cicatrix.** The seam, scar or mark remaining after the healing of a wound, or ulcer.
- Coma.** } Strong propensity
Comatose. } to sleep.
- Combustion.** Rapid oxydation, or the combination of oxygen with other elementary bodies. In common parlance the term is only used to designate this phenomenon when attended with a flame.
- Coagulation.** A thickening or separation of fluids into a more dense or solid condition, as the curdling of milk, &c.
- Coalesce.** To unite, to join into one, to run together.
- Colliquative.** Excessive or weakening.
- Congestion.** A preternatural collection of blood or other fluids; thus we speak of a congestion in a part when the vessels are much crowded or over distended.
- Concave.** Cuplike, hollowed.
- Concrete.** Collected, united into a solid form.
- Confluent.** Running together, meeting in their course.
- Congenital.** Born together: a disease or defect is said to be congenital when existing from the time of birth.
- Conglobate.** Round, collected into a ball or roundish form.
- Constipation.** A confined state of the bowels.
- Contagious.** Catching, capable of being communicated.
- Convalescence.** The state or condition of recovery.
- Convolute.** Rolled up in a cylindrical form.
- Cordate.** Heart-shaped.
- Coriaceous.** Resembling leather.
- Corolla.** The most prominent and beautiful part of flowers, usually enclosing the stamens.
- Corpse.** The dead body.
- Cortex.** The bark or skin of a plant or tree.
- Corymb.** A kind of inflorescence in which the flower stalks spring from different heights on the common stem, and forming a flat top.
- Coryza.** An increased discharge of mucus from the nose.
- Crassamentum.** The red particles of the blood.
- Crepitus.** A sharp crackling

- sound.
 Cutaneous. Belonging to the skin.
 Cutis. The skin.
 Cutis vera. The true or inner skin.
 Cuniated. }
 Cuniform. } Wedge-formed.
 Decarbonization. The act of giving off carbon.
 Deglutition. Swallowing.
 Dentate. Toothed.
 Delirium. Alienation of mind, craziness.
 Demulcents. Soothing, lubricating, and mucilaginous applications.
 Depletion. The act of emptying, particularly the removal of the blood, as by venesection.
 Depuration. The act of purifying.
 Derm. The true skin.
 Detergent. That which scatters or disperses.
 Diagnosis. The distinguishing marks of particular diseases; the symptoms by which any disease is known from all others are called its diagnostics or diagnostic symptoms.
 Diaphoresis. Perspiration.
 Diaphoretic. That which, being taken internally, produces, diaphoresis, or perspiration.
 Diaphragm. The midriff or muscular division between the chest and abdomen.—It assists in respiration.
 Diathesis. Condition of the body, as the inflammatory, &c.
 Discuss. To scatter.
 Desquamation. Scaling off.
 Dichotomous. Forked.
- Dispnoea. Oppressed breathing.
 Digitate. Like fingers.
 Dolor. Pain.
 Duodenum. The first portion of the intestines; the part in which the food becomes mixed with the bile.
 Efflorescence. Redness; in botany it means the powder substance found on *lichens*, as well as the flowering of plants.
 Effluvia. Exhalations from bodies in a state of decomposition, as from carcasses, &c.
 Electuary. A compound made by combining medical substances with saccharine matter, as honey, molasses or treacle.
 Elliptic. }
 Elliptical. } Oval.
 Emaciation. Leanness, a falling away of the flesh.
 Emesis. Vomiting.
 Emetic. A vomit or puke.
 Emmenagogue. That which tends to promote the menstrual discharge.
 Emollient. That which has a tendency to render parts more soft or pliable, as well as to relieve irritation and inflammation.
 Enecia. Continued fever.
 Enema. An injection.
 Ensiform. Sword-form, two edged, as in the flag and iris.
 Enteritis. Inflammation of the bowels.
 Entozoa. Worms.
 Epidemic. A disease of general prevalence.
 Epidermis. The cuticle, scarf or outer skin.

- Epigastric.** From 'epi' *upon*, and 'gastricus' *stomach*, i. e. upon the stomach; that division of the abdomen immediately before the stomach.
- Erethismus.** Increased sensibility and irritability.
- Erosion.** The act of eating away.
- Eruetation.** The ejection or raising of wind from the stomach.
- Erysipelas.** Inflammation of the skin; St. Anthony's fire.
- Eschar.** The dead substance produced by applying caustic, &c.
- Evacuents.** Medicines that promote the excretions of the body.
- Exacerbation.** An increase in the violence of symptoms or disease.
- Exanguious.** Without blood.
- Exanthema.** } Acute eruptive
Exanthemata. } disease.
- Excitants.** Stimulants.
- Excoriate.** To remove the skin, by means of acrid substances, to gall.
- Exerescence.** A preternatural tumor growing on the body, as a wart, polypus, &c.
- Excretion.** - Matter thrown from the surface; a collection of matter on the surface.
- Exotic.** Plants are called "exotic" when brought from foreign countries.
- Exostosis.** An unnatural bony extuberance.
- Expectorant.** That which facilitates discharges from the lungs.
- Expiration.** The act of breathing out.
- Extraneous.** Foreign, without, not intrinsic.
- Extravasation.** Effusion; a forcing out of the proper vessels.
- Exude.** The act of discharging through the pores of the skin; emitting from the surface.
- Fæces.** The alvine excretions, stool.
- Fauces.** The back part of the mouth.
- Febrile.** Pertaining to fever.
- Febris.** Fever.
- Fetid.** } Having an offensive,
Fœtid. } strong, or rancid
smell.
- Femoris.** } The thigh bone.
Os femoris. }
- Fibre.** } A thread; a fine slender
Fiber. } substance which constitutes, in the aggregate, the flesh of animals; a filament or slender thread in plants; in the plural, it means the finer roots of plants.
- Fibril.** A branch of a fibre; a very small fibre.
- Fibrin.** A peculiar organic element or compound of animals and vegetables; it chiefly constitutes the fleshy parts of animals.
- Fibrous.** Having fibres; in botany a root is said to be fibrous when it has many small radicals.
- Fibula.** The smaller bone in the leg.
- Flatulency.** Windiness in the stomach.
- Flatus.** Wind.
- Floret.** A little flower; a part of a compound flower.
- Follicle.** A small gland; a seed vessel which opens lengthwise on one side only.

- Foliaceous.** Leafy.
- Fomentation.** The act of applying warm liquids to parts, by means of flannels, &c.
- Fungus.** Proud flesh.
- Fusiform.** Spindle-shaped or tapering.
- Ganglion.** A knot; in anatomy the term is applied to certain natural knot-like enlargements, that occur in the nerves.
- Gangrene.** Mortification; the first stage of mortification.
- Gastric.** } Pertaining to the
Gastro. } stomach.
- Gastritis.** Inflammation of the stomach.
- Gelatin.** One of the primary compounds of animal and vegetable bodies, soluble in water, but not in alcohol.—When dissolved in water, it thickens, on cooling, into a well known tremulous elastic substance, called jelly.
- Glabrous.** Smooth, having an even surface.
- Glairy.** Resembling the white of an egg; of a viscid, transparent appearance.
- Glaucous.** Sea-green; mealy, and easily rubbed off.
- Gonorrhœa.** A morbid slimy discharge from the penis in venereal complaints.
- Gutta Serena.** Blindness occasioned by a diseased retina.
- Hastate.** Shaped like a halbert; it differs from arrow-shaped in having its side processes more distinct and divergent.
- Hepatic.** Pertaining to the liver.
- Hepatitis.** Inflammation of the liver.
- Herbaceous.** Pertaining to herbs.
- Hereditary.** That which has descended from an ancestor.
- Herps.** Tetter.
- Hernia.** Rupture.
- Hematuria.** The voiding of blood with the urine.
- Hemoptysis.** A spitting of blood; bleeding from the lungs.
- Hemorrhage.** Violent flow of blood.
- Hemorrhoids.** Piles.
- Homogeneous.** Of the same kind or nature; consisting of similar parts.
- Humors.** Liquids; the fluids of the body, as the blood, bile, and humors of the eye.
- Hydarthus.** White-swelling.
- Hydragogue.** A medicine that causes watery discharges.
- Hydrocardia.** Dropsy of the heart.
- Hydrocele.** Dropsy of the scrotum.
- Hydrometra.** Dropsy of the womb.
- Hydrocephalis.** Dropsy of the brain.
- Hydrothorax.** Dropsy of the chest.
- Hydrops.** Dropsy.
- Hydrophobia.** Rabidness; madness from the bite of rabid animals.
- Hygiene.** A plan of restoring or preserving health without the use of medicine, as by dieting and proper exercise.
- Hyperæmia.** Fullness of the blood-vessels.
- Hypertrophy.** Enlargement.

- Hypochondriasis. } Vapors, low
Hypochondria. } spirits, blues
or horrors.
- Hypochondrium. That portion of the abdomen that lies on either side of the epigastric region, immediately below the false ribs.
- Ichor. A sanious matter flowing from ulcers.
- Icterus. The jaundice.
- Idio miasmata. A miasm arising from the human body.
- Idiopathic. A disease is said to be idiopathic when it has an independent origin, that is, one that is not symptomatic.
- Idiosyncrasy. Peculiarity of disposition, such as to render the person peculiarly liable to certain diseases, which, perhaps, a hundred other persons, not having this predisposition, would escape from.
- Ileum. The last or lower portion of the small intestines.
- Imbricate. Laying over like scales, or shingles on a roof.
- Indicate. To point out.
- Indication. Course pointed out; an object to be accomplished in the cure of disease; a course to be pursued in the treatment of a case.
- Indurated. Hardened.
- Infection. Contagion; the principle or cause of a disease.
- Inflated. Filled with wind; in botany the term is applied to capsules or vesicles which are hollow or naturally contain air.
- Infusion. A tea; a preparation made by infusing a medicinal substance in water.
- Ingesta. The substances received into the stomach.
- Ingestion. The act of receiving into the stomach.
- Inorganic. Not in an organized state.
- itis. The termination 'itis' indicates inflammation; whenever, therefore, the name of any organ terminates in this way, that organ is to be understood to be in a state of inflammation; thus the latin name of the stomach is *gastricus*, and inflammation of the stomach is called *gastritis*; the name of the intestines is *entera*, and inflammation of the bowels is called *enteritis*, &c.
- Jejunum. The second portion of the small intestines, so called because it is usually found empty.
- Kino miasmata. Vegetable miasma.
- Labiata. Lipid.
- Labia pudendi. External lips of the female organs of generation.
- Laceration. The condition of being torn; a wound produced by tearing of the flesh.
- Lanceolate. Spearshaped, narrow, with both ends acute.
- Larynx. The cartilaginous cavity situated behind the tongue at the commencement of the wind-pipe.
- Lateritious. Brick-like; like the dust of a brick.
- Linear. Long and narrow with both sides parallel, like the blades of grass.
- Lepra. The leprosy.

- Lesion.** An injury or wound.
- Ligaments.** Any thing that ties; in anatomy, a strong firm band by which the bones are joined together.
- Ligate.** To tie or bind.
- Ligature.** The thread or cord by which any thing is tied.
- Livid.** Black and blue, lead colored, purple.
- Lobed.** Divided into lobes.
- Lues.** A pestilence, poison, or plague.
- Lymph.** The pale rose-colored fluid contained in the lymphatics.
- Lymphatics.** A very delicate set of vessels found in abundance in most parts of the body; they absorb and carry the lymph.
- Mania.** Madness, insanity.
- Meninges.** The two membranes that envelope the brain, the *duramater* and *piamater*.
- Metamorphosis.** A change of form, relation or shape; sometimes it means the matter or substance changed.
- Metastasis.** A translation or change to other parts.
- Miasmata.** } Malaria; a pestif-
- Miasma.** } erous vapor arising from marshes or moist places containing much vegetable or animal mould.
- Midrib.** The main or middle rib of a leaf, running from the stem to the point or apex.
- Midriff.** The diaphragm or broad muscular partition between the chest and abdomen.
- Miliary.** Of the appearance of millet seed; a miliary eruption is one whose vesicles resemble millet seeds.
- Mobility.** Capacity of being moved; moving faculty.
- Morbid.** Diseased.
- Monœcious.** A plant is said to be monœcious when it has both pistilate and staminate flowers.
- Mucus.** A viscid fluid secreted by the mucous membrane.
- Muscles.** The organs of motion in animals, being bundles of fibres united and surrounded by cellular membrane; the muscles constituting the flesh.
- Nausea.** A sickness at the stomach, and inclination to vomit, yet not sufficient to effect it; it is sometimes produced by a disgusting smell, taste, or sight.
- Nephritis.** Inflammation of the kidneys.
- Neurology.** The science of the nerves.
- Neuralgia.** Painful affection of the nerves.
- Nidorous.** Resembling the taste and smell of roasted meat.
- Normal.** Regular, natural.
- Nosology.** A systematic arrangement or classification of diseases.
- Nutritive.** Having the quality of nourishing.
- Oblong.** Longer than oval, with both sides parallel.
- Obovate.** Ovate with the narrow end towards the stem or place of insertion.
- Obtuse.** Blunt, rounded, not acute.

- Odor. Smell, scent, perfume.
- Edema. Swelling; a soft swelling, as by a collection of water.
- Edematous. Pertaining to œdema.
- Esophagus. The gullet, or channel leading to the stomach.
- Omentum. The caul or epiploon, a membranous covering that drops or hangs over the front of the entrails.
- Opaque. Impervious to light, dark, obscure, not transparent.
- Ophthalmia. A disease of the eye.
- Ophthalmitis. Inflammation of the eyes.
- Organic. Pertaining to an organ or organization.
- Os. Bone; mouth.
- Ossify. To turn to bone.
- Oval. } Of the shape of an
Ovate. } egg.
- Oxydation. The chemical union of any substance with oxygen.
- Oxygen. A subtile gaseous element, which is a constituent of the atmosphere, as well as most organic substances; it is the supporter of combustion, and almost the only acidifying principle: it is this element in the atmosphere that supports respiration, and it is upon its union with combustible substances in the body that the latter is dependant for its heat.
- Palmate. Hand-shaped, so divided as to resemble a hand with the fingers spread.
- Palpitation. A beating of the heart, particularly a preternatural beating, such as is occasioned by a fright, or some violent agitation.
- Pancreas. A long gland situated on the duodenum, or rather between this and the bottom of the stomach; it secretes a fluid that is discharged into the duodenum, and assists in digestion.
- Panicle. A loose, irregular bunch of flowers, with subdivided branches, as the oat.
- Paracentesis. In surgery, the operation called *tapping*.
- Paralysis. Palsy; the loss of the power of muscular motion.
- Parenchyma. In anatomy, a loose spongy substance; the spongy cellular tissue that connects parts together, particularly those of the viscera, as the aircells and blood vessels in the lungs, & the absorbents arteries and veins in the liver; in botany it means nearly the same thing.
- Paronychia. A whitlow or felon.
- Parotid. Near the ear.
- Paroxysm. An obvious increase or aggravation of the symptoms of disease, which may last longer or shorter and then decline.
- Pathological. Pertaining to pathology.
- Pathologist. One versed *in*, or treating *on* pathology.
- Pathology. The doctrine or law of diseases; that which treats on the nature of diseases.
- Peccant. Morbid, bad, corrupt, injurious.

- Peduncle.** A stem bearing flowers and fruit.
- Peltate.** Having the petiole attached to some part on the under side of the leaf, as in the *mandrake*.
- Pendant.** } Hanging down.
- Pendulous.** } drooping.
- Penis.** The cylindrical male organ of generation.
- Perennial.** Lasting more than two years.
- Perfoliate.** Having the stem running through the leaf.
- Pericardium.** The membranous sack that surrounds the heart.
- Periosteum.** The membrane that invests the bones.
- Peristaltic motion.** The vermicular motion of the intestines.
- Peritoneum.** The membrane by which all the viscera of the abdomen are surrounded.
- Peritonitis.** Inflammation of the peritoneum.
- Permeate.** To pass through the pores of any thing.
- Pest.** } The plague.
- Pestis.** }
- Petals.** The leaf of the corolla in flowers; it is usually colored.
- Petichiaë.** A red or purple spot which resembles a flea bite.
- Petiolate.** Pertaining to petiole.
- Petiole.** The stalk which supports the leaf.
- Pharmacy.** That part of medical science that treats on the preparation, compounding and preservation of medical substances; the business of the apothecary.
- Phlegm.** A thick, white or semitransparent, tenacious fluid secreted in the lungs; in chemistry it means water from distillation.
- Phlebitis.** Inflammation of the veins.
- Phlegmasia.** Inflammation.
- Phlegmonic.** }
- Phlegmonous.** } Inflammatory.
- Phrenitis.** Inflammation of the brain.
- Phthisis.** Consumption of the lungs.
- Physiology.** That science which contemplates the properties and functions of animals and plants; the science of life.
- Physiological.** Pertaining to physiology.
- Pinnate.** Leaves are called *pinnate* when they are composed of two rows of small leaflets situated on both sides of a common petiole, as in the locust, rose, &c.
- Pleura.** A membrane which lines the internal surface of the chest or throat, and covers its viscera; it forms a great process,—the mediastinum which divides the thorax into two cavities.
- Pleuritis.** Pleurisy; inflammation of the pleura.
- Pneumonia.** Inflammation of the lungs.
- Pollen.** Fine flour, as the dust that flies in a mill: in botany it means the fine dust that is contained within the anthers of flowers.
- Post mortem.** After death.
- Præcordia.** The region immediately in front of the heart; but it is frequently applied

- to the whole of the forepart of the thorax.
- Priapism. A preternatural or continual erection of the penis.
- Primary. First in order of time, importance, cause, or effect.
- Procumbent. Laying on the ground.
- Prolapsus. Falling down, descent.
- Prognosis. The foretelling of the event of diseases, by the symptoms and other circumstances in the case.
- Prognosticate. To foreshow; to tell the future events by the present.
- Prophylactic. Preventative.
- Prostate. The name of a gland in the male, situated just before the neck of the bladder, and surrounding the beginning of the urethra.
- Proximate. Nearest, next; in pathology it is applied to the immediate effects of the exciting cause of disease, and hence may be said to be the disease itself.
- Ptyalism. Salivation; an increased discharge of saliva from the mouth,—often brought on by the use of mercury.
- Pubescent. Hairy, downy, or woolly.
- Pubis. } Hair, down, or wool.
 Pubes. } in anatomy the
 shear-bone is called *os pubis*
 because the integuments over
 it are covered with hair, in
 the adult.
- Pulmonary. Pertaining to the lungs.
- Pulp. A soft mass; the soft succulent part of a plant, or its fruit.
- Pultaceous. Macerated, soft, nearly fluid.
- Pungent. Sharp, acrid, piercing, biting.
- Puriform. Pus-like.
- Pus. A yellowish white matter secreted in suppurations and ulcers, and always present in the healing of lesions in the solids.
- Putrid. In a state of dissolution or disorganization; corrupt, rotten.
- Pyriform. Pear-shaped.
- Raceme. A kind of inflorescence in which the flowers are arranged by simple pedicels on all sides of a common peduncle, as in the currant and grape.
- Radii. Rays.
- Radical. Pertaining to the root; growing from the root.
- Radicle. A minute fibre of a root.
- Radix. A root; the part of a plant that is in the ground.
- Reflected. Thrown back, returned; turned backward.
- Resuscitation. The act of reviving, from apparent death; the state of being revived.
- Respiration. The function of breathing.
- Roseola. Measles.
- Rubefacient. That which produces redness when applied to the body.
- Rubor. Red, Redness.
- Rhizoma. A large fleshy or woody part or organ of a root, analogous to a stem under ground, which is nei-

- ther a tuber nor a bulb.
- Saccharine.** Pertaining to sugar; sweet.
- Saliva.** The fluid which is secreted by the saliva glands, and serves to moisten the mouth and tongue, as well as to assist in mastication.
- Sanative.** Healing; having the power to heal.
- Sanguiferous.** Conveying blood; the sanguiferous vessels are the arteries and veins.
- Sanguinary.** Bloody; a medical plant.
- Sanguineous.** Abounding with blood; plethoric.
- Sanies.** A thin limpid and greenish matter discharged from ulcers.
- Sanious.** Pertaining to sanies.
- Scabies.** The itch.
- Scape.** A stalk that springs from the root, and supports flowers and fruit, but no leaves, as the dandelion.
- Scarletina.** Scarlet fever.
- Sciatica.** The hip disease.
- Scirrhus.** Pertaining to scirrhus.
- Scirrhus.** A hard or indurated tumor, which at first is of the natural color, but the disease is apt to assume a malignant form, when the skin may turn purple or livid and the surface irregular, and the tumor proceed to ulceration. In this condition the affection generally receives the name of *cancer*.
- Scorbutic.** Pertaining to scorbutus.
- Scorbutus.** Scurvy.
- Scrofula.** } King's evil.
- Scrophula.** }
- Scrofulous.** Pertaining to scrophula.
- Scrotum.** The pendulous pouch containing the testes.
- Secretion.** The act of discerning, or producing specific collections from the general circulating mass, as the bile, saliva mucus, &c.; the matter secreted.
- Segment.** A part or principal division of a leaf, calyx, or corolla.
- Semina.** Seed.
- Sensorial.** Pertaining to the sensorium or seat of sense.
- Serum.** The thin or watery part of the blood; also the same of milk.
- Serrate.** Jagged, notched like saw-teeth.
- Sessile.** Sitting down; placed immediately on the main stem without a footstalk.
- Sialagogue.** That which promotes salivation.
- Sinapism.** A mustard plaster.
- Sinnate.** A leaf is said to be sinnate when its sides or margins have breaks in them or are hollowed out like a bay.
- Slough.** To separate from the live flesh; a dead part that is separating; a mortified part.
- Sloughing.** Separating in a dead mass.
- Solution.** In pharmacy, it means a liquid containing some substance in a dissolved or suspended condition.
- Sordes.** Foul matter, dregs, filthy matter; sordes are apt to

- collect about the teeth of persons that neglect cleaning them: this term is also equivalent with *sanies* and *ichor*, the offensive matter running out of old ulcers and sores.
- Sordid.** Filthy, dirty, foul.
- Spasmus.** Spasm.
- Spasmodic.** Pertaining to spasm.
- Spadix.** An elongated receptacle of flowers.
- Spatha.** A sheathing calyx opening length-wise on one side, and consisting of one or more valves.
- Specific.** A remedy that certainly cures any particular disease.
- Sphacelus.** Mortified parts; mortification.
- Spike.** A kind of inflorescence in which the flowers are sessile, or nearly so, and thus forming a spiral projection, as in the mullein and plantain.
- Sputa.** Spittle.
- Stimulants.** } Excitants, as pepper, &c.
- Stimuli.** } per, &c.
- Stipe.** The stem of a fern or fungus; the stem of the down of seeds, as in the dandelion.
- Stipule.** A leafy appendage, situated at the base of leaves or petioles.
- Stomachics.** Medicines that regulate the stomach and set pleasantly.
- Striated.** Marked with fine parallel lines.
- Struma.** Scrofula; it is also applied to bronchocele.
- Strumous.** Pertaining to scrofula; scrophulous.
- Sterretorous.** Snoring.
- Sub.** In anatomy this word is prefixed to others when it is desired to speak of parts that lay under; it means, therefore, that this lies under the other part whose name it preceeds: thus, subscapularis, under the scapula,—submaxillary, under the maxilla or jaw, &c. In pathology it is used to express an imperfect or feeble state of disease; as subacute, not acute, less than acute &c. In botany when shape or any other character cannot be precisely defined, sub is prefixed to the term used; it then means nearly so; as subrotundus, roundish; subsessiles, not quite destitute of a footstalk, &c. In chemistry the term is applied when a salifiable base is predominant in the compound, there being a deficiency of the acid; as subcarbonate of potassa, subcarbonate of soda, &c.
- Subsultus tendinum.** A twitching of the tendons, arising from convulsive jerking of the muscles.
- Sudamina.** Small vesicles that come on suddenly without fever.
- Sudorifics.** Medicines which promote sweating.
- Suppuration.** That process by which pus is formed in an inflamed part.
- Syncope.** Fainting.
- Synocha.** Inflammatory fever.
- Synochus.** A fever of a sub-inflammatory character.
- Synovia.** Joint water.
- Syphilis.** The venereal disease.
- Temporal.** Belonging to the

- temple.
- Tenesmus.** A continual inclination to go to stool without a discharge.
- Tendons.** The white cord or shining end of muscles; sinews.
- Terminal.** Extreme, situated at the end.
- Ternate.** Three together, as the leaves of the clover.
- Tetanus.** Locked-jaw.
- Thorax.** The chest, or cavity within the breast.
- Thyrse.** A panicle which is dense.
- Tissue.** Texture; a general name for parts.
- Tonic.** That which tones, strengthens, or braces up.
- Tonsilitis.** Inflammation of the tonsils.
- Tormina.** Severe pains.
- Trachea.** The windpipe.
- Translucent.** Admitting light, but yet not so as to render objects distinctly visible; semi-transparent.
- Transude.** To pass through the pores of any thing.
- Triennial.** That which is of three years duration; every third year.
- Trilobed.** Three-lobed.
- Triple.** Three-fold; three united; three times.
- Tuber.** A solid fleshy knob.
- Tubercles.** Knots, lumps, or tumors.
- Tumefaction.** Swelling.
- Tumor.** } A swelling.
- Tumour.** }
- Tunica.** } A membrane or covering.
- Tunic.** }
- Tunica vaginalis.** A sheathing tunic; the tunic embracing the spermatic chord and vessels.
- Tusses.** A cough.
- Typhoid.** The term typhoid is now applied to a distinct species of fever whose primary seat is in the intestines; it has many of the symptoms of typhus.
- Typhus.** A species of continued fever that is characterized by great debility, and a tendency of the fluids to putrefaction; the pulse is weak but corded.
- Umbilical.** Pertaining to the navel.
- Umbilicus.** The navel.
- Umbel.** A kind of inflorescence in which the flower-stalks diverge from a centre, like the sticks of an umbrella, as in the parsnip, fennel, &c.
- Umbelliferous.** Pertaining to or bearing umbels.
- Uniflora.** } One-flowered.
- Uniflorus.** }
- Urethra.** The membranous canal that conveys the urine from the bladder.
- Ureters.** The two membranous canals that convey the urine from the kidneys into the bladder.
- Uticaria.** The nettle rash.
- Uterus.** The womb.
- Vaccina.** The cow-pox.
- Vagina.** The canal leading to the womb.
- Variola.** The small pox.
- Varioloides.** Modified small-pox.
- Vermifuge.** A medicine that destroys or expels worms.
- Vertigo.** Dizziness.

- Vessication. The formation of
vessicles; blistering.
- Vicid. Glutinous, sticky.
- Viscera. The entrails; the or-
gans of the chest and abdo-
men.
- Viscus. An organ, as the liv-
er, stomach, &c.
- Virus. Poison, contagion, foul
matter.
- Villous. Like velvet.
- Vis vitæ. Vital force.
- Vis medicatrix naturæ. The
healing power of nature.
- Whorls. Flowers and leaves
are said to be in whorls when
they are situated in circular
order around the stem.

BOTANICAL CLASSIFICATION.

It will be observed that a notice of the *Class* and *Order* to which the plants belong, is given in the part on *Materia Medica*. It is thought, therefore, that a table, explaining the Artificial or Linnæen System of Classification, would be of considerable service to persons unacquainted with botany, in whose hands this work might chance to fall.

It is to be understood that this system is founded on the principle that vegetables, like animals, are propagated by a regularly organized *Sexual System*, embracing *Male* and *Female* organs of generation. These organs are situated in the flowers of the plants, and constitute the *germen* or womb,—the *style* (when necessary,) which serves to elevate the *stigma*, which receives the *polen* or farina fæcundens, that impregnates the germen;—the *stamen* (when necessary,) which serves to elevate the *anther*, which produces the polen or generating principle.

For the sake of convenience, the Greek numerals were used to distinguish the respective classes and orders. The word 'Andria,' signifying *Husband*, was applied to the stamen, and 'Gynia,' signifying *Wife*, was the name given to the pistil or bearing part. Now it was only left to apply the numerals to these names to distinguish the classes and orders.

As both the Latin and Greek numerals are frequently used by botanical writers, a table of both is here given.

LATIN.

GREEK.

1 Unus	11 Undecim	1 Monos	11 Endeka
2 Bis	12 Duodecim	2 Dis	12 Dodeka
3 Tres	13 Tredecim	3 Tries	13 Dekatreis
4 Quatuor	14 Quatuordecim	4 Tettares	14 Dektettaris
5 Quinque	15 Quindecim	5 Pente	15 Decapente
6 Sex	16 Sexdecim	6 Hex	16 Dekaeax
7 Septem	17 Septendecim	7 Hepta	17 Dekaepta
8 Octo	18 Octodecim	8 Octo	18 Dekaocto
9 Novem	19 Novendecim	9 Ennea	19 Dekaennea
10 Decem	20 Vaginti	10 Deka	20 Eikosi
Many, Multus.		Many, Polus.	

MONANDRIA (from 'monos' ONE, and 'aner' STAMEN, i. e., one stamen.)

This class contains two orders distinguished by the respective numbers of pistils in the flowers of their genera.

CLASS I.	{	Ord. 1, <i>Monogynia</i> ,	}	{	We have but few examples of this class of plants in the U. States, but in South America, and in the East Indies, there are some of considerable importance, as the <i>ginger</i> , <i>arrowroot</i> , &c.
		Ord. 2, <i>Digynia</i> .			

DIANDRIA (from 'dis' TWO, and 'aner' STAMEN, i. e., two stamens.)

This class contains three orders, all distinguished by the respective numbers of pistils in the flowers of their genera.

CLASS II.	{	Ord. 1, <i>Monogynia</i> ,	}	{	This class, though somewhat larger than the first, is also somewhat limited; among its most important genera are the <i>leptandria</i> , <i>olca</i> , and <i>peper</i> .
		Ord. 2, <i>Digynia</i> ,			
		Ord. 3, <i>Trigynia</i> .			

TRIANDRIA (from 'tries' THREE, and 'aner' STAMEN, i. e., three stamens.)

This class contains three orders, which are distinguished by the number of pistils in the flowers of their genera.

CLASS III.	{	Ord. 1, <i>Monogynia</i> ,	}	{	Triandria is a larger class of plants than the two first; the first order embraces the <i>crocus</i> or saffron genus, and <i>iris</i> or flower-de-luce. The second contains the large family of <i>grasses</i> or gramina, embracing the <i>grains</i> , as the <i>wheat</i> , <i>rye</i> , <i>oats</i> , &c.
		Ord. 2, <i>Digynia</i> ,			
		Ord. 3, <i>Trigynia</i> .			

TETRANDRIA (from 'tettares' FOUR, and 'aner' STAMEN, i. e., four stamens.)

This class contains three orders, which are distinguished by the number of pistils in the flowers of their genera.

CLASS IV.	{	Ord. 1, <i>Monogynia</i> ,	}	{	There is a very great dissimilarity existing between the respective orders of this class; it contains the <i>houstonia</i> , <i>plantago</i> , <i>galium</i> , and the <i>cornus</i> , <i>rubia</i> , and <i>hamamelis</i> genera.
		Ord. 2, <i>Digynia</i> ,			
		Ord. 4, <i>Tetragynia</i> .			

PETANDRIA (from 'pente' FIVE, and 'aner' STAMEN, i. e., five stamens.)

This class contains seven orders, all distinguished by the number of pistils in the flowers of their genera.

CLASS V. {
 Ord. 1, *Monogynia*,
 Ord. 2, *Digynia*,
 Ord. 3, *Trigynia*,
 Ord. 4, *Tetragynia*,
 Ord. 5, *Pentagynia*,
 Ord. 6, *Hexagynia*,
 Ord. 12, *Polygynia*. }

{ This is a very extensive class of plants, and with the syngenesia, embraces, perhaps, one fourth of the entire vegetable kingdom.— Among the genera of this class, are found in promiscuous profusion, some of the most valuable medicines, with some of the most active poisons. In the first order are found the *lobelia*, *cayenne pepper*, *jalap*, *ippecac*, *cinchona*, *Carolina pink*, *aloe*, &c. In the second, the *elm*, *gentian*, the *asclepias* or *milk-weeds*, *angelica*, the *apocynums*, &c. Among the poisons found in this class, are the *nux vomica*, *thorn apple*, *poison hemlock*, *wild parsnip*, *nightshade*, &c.

HEXANDRIA (from 'hex' SIX, and 'aner' STAMEN, i. e., six stamens.)

This class contains four orders, distinguished by the respective numbers of pistils in the flowers of their genera.

CLASS VI. {
 Ord. 1, *Monogynia*,
 Ord. 2, *Digynia*,
 Ord. 3, *Trigynia*,
 Ord. 12, *Polyandria* }

{ Many genera of this class are distinguished for the beauty of their flowers; the first contains the *lily*, *tulip*, *crown-imperial*, *hyacinth* and the humble *violet*. The second order furnishes the *rice*, one of the most important of all fruit bearing plants.

HEPTANDRIA (from 'hepta' SEVEN, and 'aner' STAMEN, i. e., seven stamens.)

This class contains three orders, distinguished by the respective number of pistils in the flowers of their genera.

CLASS VII. {
 Ord. 1, *Monogynia*,
 Ord. 3, *Trigynia*,
 Ord. 4, *Tetragynia*. }

{ There are, as yet, few medicines of much importance discovered in this class. The first order embraces the *horse chestnut*, that beautiful ornamental tree.

OCTANDRIA (from 'octo' EIGHT, and 'aner' STAMEN, i. e., *eight stamens*.)

This class contains four orders, distinguished by the respective number of pistils in the flowers of their genera.

CLASS VIII.	{	Ord. 1, <i>Monogynia</i> ,	{	This, like the seventh class, has not yet furnished many valuable articles of medicine. The <i>buckwheat</i> , <i>smartweed</i> , and <i>jeffersonia</i> , are embraced in it.
		Ord. 2, <i>Digynia</i> ,		
		Ord. 3, <i>Trigynia</i> ,		
		Ord. 4, <i>Tetragynia</i> .		

ENNEANDRIA (from 'ennea' NINE, and 'aner' STAMEN, i. e., *nine stamens*.)

This class contains three orders, distinguished by the respective number of pistils in the flowers of their genera.

CLASS IX.	{	Ord. 1, <i>Monogynia</i> ,	{	Enneandria is not a large class, but it contains some very useful plants; it embraces the <i>camphor</i> , <i>cinnamon</i> , <i>sassafras</i> , <i>spice</i> , and <i>cashew-nut</i> trees, as well as the <i>rhubarb</i> and other valuable plants.
		Ord. 2, <i>Digynia</i> ,		
		Ord. 3, <i>Trigynia</i> .		

DECANDRIA (from 'deka' TEN, and 'aner' a STAMEN, i. e., *ten stamens*.)

This class contains six orders, all distinguished by the respective number of pistils in the flowers of their genera.

CLASS X.	{	Ord. 1, <i>Monogynia</i> ,	{	This is the last class in the artificial system, which is distinguished by distinct and separate stamens; other classes may have the same number of stamens as this or others before it, but are not separate and distinct; they have their anthers joined, or are otherwise distinguished. The <i>sennas</i> , <i>winter-green</i> and <i>beautiful pink</i> , are contained in this class.
		Ord. 2, <i>Digynia</i> ,		
		Ord. 3, <i>Trigynia</i> ,		
		Ord. 4, <i>Tetragynia</i> ,		
		Ord. 5, <i>Pentagynia</i> ,		
		Ord. 10, <i>Decagynia</i> .		

ICOSANDRIA (from 'eikosi' TWENTY, and 'aner' a STAMEN, i. e., *twenty stamens*.*)

This class contains three orders all distinguished by the respective numbers of pistils in the flowers of their genera.

*This is a very improper name for this class, as it is not by any means confined to twenty stamens, but in some instances contains many more. The most prominent distinguishing feature of the class, is the insertion of the stamens into the calyx, and hence the more appropriate name of *calyandria* has been proposed for it.

CLASS XI. { Ord. 1, *Monogynia*,
Ord. 2 to 5, *Di-Pen-*
tagynia,
Ord. 12, *Polygynia*. }

{ This class is distinguished by its having its stamens inserted into the calyx. The second, third, fourth and fifth orders of this class are united into one, called *Di-Pentagynia*. The apple, pear, peach, plum, cherry, almond, sloe, and many other very valuable fruits belong to this class. It is supposed that the fruits of those plants having their stamens inserted into the calyx, are never poisonous.

POLYANDRIA (from 'polus' MANY, and 'aner' STAMEN, i. e., many stamens.)

This class contains three orders which are distinguished by the respective numbers of pistils in the flowers of their genera.

CLASS XII. { Ord. 1, *Monogynia*,
Ord. 2 to 5, *Di-Pen-*
tagynia,
Ord. 12, *Pologynia*. }

{ Polyandria has its distinction by having its stamens, which are from twenty, to sometimes several hundred, inserted into the receptacle, or the top of the flower stem. Like the class before this, it has the second, third, fourth and fifth orders united into one, called *Di-Pentagynia*. Among the most important plants in this class, are the mayapple, white pond lilly, Chinese tea, &c.

DIDYNAMIA (from 'dis' TWICE, 'dys' TWO, and 'nema' a FILAMENT, i. e., four stamens.)

This class has two orders, distinguished,—the first by its naked seed, and the second by having its seed enclosed in a pericarp.

CLASS XIII. { Ord. 1, *Gymnosper-*
miu.
Ord. 2, *Angiosper-*
mia. }

{ This class is distinguished by the different lengths and number of its stamens; their number is four, two of which are shorter than the others; they stand in pairs; the inner pair is shorter, and converging. In the first order, we have the marjorum, mints, hyssop, balm, horehound, catmint, &c.; the second embraces the trumpet-flower, the foxglove and others.

TETRADYNAMIA (from '*tetra*' FOUR, '*dis*' TWO, and '*nema*' a FILAMENT, i. e., two and four filaments.)

This class has two orders, distinguished by the shape of their pods; those of the first are short and round, while the pods in the second order, are long and narrow.

CLASS XIV.	{	Ord. 1, <i>Siliculosa</i> ,	}	{	The distinguishing marks of this class, are that it has six stamens with two shorter than the rest; they are always found in pairs; the two shorter ones stand opposite each other. To this class belong the cruciform tribes, as the cabbage, mustard, radish, turnip, &c.
		Ord. 2, <i>Siliculosæ</i> .	}		

MONADELPHIA (from '*monos*' ONE, and '*delphos*' BROTHER, i. e., one brother.)

This class has six orders, distinguished by their respective numbers of stamens instead of the pistils; the stamens are united, some only at the bottom, but others throughout; thus forming a tube: the anthers are not united.

CLASS XV.	{	Ord. 1, <i>Monandria</i> ,	}	{	The circumstance of the union of the stamens has given this and the following class, the name of delphia or brotherhood: the orders, therefore, are known by the number of stamens. To this class belong the geranium genus, the passion flower, mallows, &c.
		Ord. 3, <i>Triandria</i> ,	}		
		Ord. 5, <i>Pentandria</i> ,	}		
		Ord. 7, <i>Heptandria</i> ,	}		
		Ord. 10, <i>Decandria</i> ,	}		
		Ord. 13, <i>Polyandria</i>	}		

DIADELPHIA (from '*dis*' TWICE, and '*delphos*' a BROTHER, i. e., two brothers.)

This class has two orders, distinguished by their respective numbers of stamens. Another delphia class containing more families or unions, has been recognized, but its genera are now referred to class Polyandria.

CLASS XVI.	{	Ord. 5 to 8, <i>Pent-</i>	}	{	Diadelphia, as its name denotes, is a class containing two brotherhoods, that is, the stamens are united into two bodies. The fifth, sixth, seventh and eighth classes, are united into one, and is called Pent-Octandria. In this class we find the seneca snake root, the liquorice, and the leguminous tribes.
		<i>Octandria</i> .	}		
		Ord. 10, <i>Decandria</i> .	}		

SYNGENESIA (*from the Greek 'syn' TOGETHER, and 'genesia' ORIGIN, because its anthers are together.*)

This class has five orders distinguished by the difference in their efflorescence. In order 1st, the florets are all perfect,—containing both stamens and styles. In order 2d, the florets of the disk or centre are perfect, while those of the margin or ray, contain only pistils. The 3d order has perfect florets in the disk, while those of the ray have neither pistils nor stamens. In the 4th order we find that the florets of the disk have stamens but no pistils, while those of the ray have pistils but no stamens. Finally, in the 5th order the florets are all perfect like those of the first order, but it differs from that order in having a perianth to each floret. In all the other plants of this class the florets are destitute of any thing resembling a distinct calyx.

CLASS XVII.	{	Ord. 1, <i>Æqualis</i> ,	{	This class is distinguished by its flowers being compound, that is, composed of many individual small flowers or florets, disposed in a common receptacle, forming heads as in the daisy, dandelion, and thistle.
		Ord. 2, <i>Superflua</i> ,		
		Ord. 3, <i>Frustranea</i> ,		
		Ord. 4, <i>Necessari</i> ,		
		Ord. 5, <i>Segregata</i> .		

GYNANDRIA (*named so from the circumstance of the pistils and stamens growing together.*)

This class has five orders, distinguished by the number of filaments or stamens in the flowers of their genera.

CLASS XVIII.	{	Ord. 1, <i>Monandria</i> ,	{	This class is characterized by having its stamens situated on the pistil, sometimes on the germen, and again on the style. In many instances they consist of little more than a collection of glutinous pollen, called polina. As examples of this class, the lady's slipper, and virginia snake root might be named.
		Ord. 2, <i>Diandria</i> ,		
		Ord. 5, <i>Pentandria</i> ,		
		Ord. 6, <i>Hexandria</i> ,		
		Ord. 10, <i>Decandria</i>		

MONŒCIA (*from 'monos' ONE, and 'oikos' HOUSE, i. e., one house.*)

This class has seven orders; the first, second, third, fourth, fifth, and sixth are distinguished by the number of their stamens; the seventh order has its stamens united into a column.

CLASS XIX.	{	Ord. 1, <i>Monandria</i> ,	{	The class <i>Monœcia</i> (one house) contains plants where, growing from the same root, there are flowers containing only stamens, and others only pistils. This class embraces the breadfruit, fig, mulberry, Indian corn, and the cucumber and melon tribes.
		Ord. 3, <i>Triandria</i> ,		
		Ord. 4, <i>Tetrandria</i> ,		
		Ord. 5, <i>Pentandria</i> ,		
		Ord. 6, <i>Hexandria</i> ,		
		Ord. 12, <i>Polyandria</i>		
		Ord. 15, <i>Monodelphia</i> .		

DIOECIA (from 'dis' TWO, and 'oikos' HOUSE, i. e. two houses.)

This class contains ten orders, distinguished by the number of stamens in the flowers, except the last, which has its stamens united into a single body.

CLASS XX.	{	Ord. 2, <i>Diandria</i> ,	{	Dioecia is a class which, as its name denotes, consists of two houses, that is, it has its stamens on one plant or tree, and its pistils on another. This class contains the willows, dates, palms, bayberry, hop, prickly ash, poplar, cocculus, the pitcher plant, and the nutmeg.
		Ord. 3, <i>Triandria</i> ,		
		Ord. 4, <i>Tetrandria</i> ,		
		Ord. 5, <i>Pentandria</i> ,		
		Ord. 6, <i>Hexandria</i> ,		
		Ord. 8, <i>Octandria</i> ,		
		Ord. 9, <i>Enneandria</i> ,		
		Ord. 10, <i>Decandria</i> ,		
		Ord. 12, <i>Polyandria</i>		
		Ord. 15, <i>Monodelphia</i> .		

CRYPTOGAMIA.

This class contains six orders; the first of these contains the ferns; the second the mosses; the third, the liver-worts; the fourth, the algæ or sea weeds; the fifth, the lichens; the sixth, the mushrooms, which are all characterized by peculiarities that readily distinguish them.

CLASS XXI.	{	Ord. 1, <i>Filices</i> ,	{	Cryptogamia, the last class that is now embraced in this system of classification, is one whose sexual organs are either entirely concealed or can only be discovered by the strictest scrutiny. All plants that cannot be associated in any of the other classes are now referred to cryptogamia. This class embraces the polypodys, Iceland and Irish mosses, the knotty fucus, from which the soda and iodyne is made, &c.
		Ord. 2, <i>Musci</i> ,		
		Ord. 3, <i>Hepaticae</i> ,		
		Ord. 4, <i>Algæ</i> ,		
		Ord. 5, <i>Lichenes</i> ,		
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ERRATA.

There are many errors in this work, as must be the case with the first edition of any book, unless time can be had to bestow special care upon the proof, which could not be gained when this work passed through the press. The most of these, however, are typographical, and can easily be corrected by every reader. It is therefore thought unnecessary particularly to notice those of this character, hoping that the candid reader will look over them. Nevertheless, there are a few, that are of a more important character, and that should be corrected here:—On page 35, sixth and seventh lines from the bottom, for ‘sulphate of copper’ read *subacetate of coppér*; on pa. 369, fifth line from the bottom, for ‘and bilious fever’ read *and is very good in bilious fever*; on pa. 391 Sec. vi, and on pa. 400 Sec. vii, should have been iv and v. Possibly there may be others of some importance that may in the hurry, have been overlooked.

THE END.



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